C. R. DRYSDALE

ON

SYPHILIS.

Geo. F. Barwardo.
1891.

SYPHILIS:

ITS NATURE AND TREATMENT.

WITH A CHAPTER

ON GONORRHŒA.

BY

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ERRATA.

Page 10, line 20, for *santal* read *sandal.*

Page 40, line 18, for *nouvelle* read *nouveau.*

Page 45, line 2, after *baths,* insert *in sloughing phagedæna.*

Page 57, line 24, for *Morrell,* read *Morell* ; also after *Virchow,* line 30, insert (*Works' Observations VII and VIII.*)

Page 62, line 32, for *cure* read *case.*

Page 70, line 15, for *sclerema* read *scleroma.*

Page 98, line 8, after *time,* insert *Dr. C. B. Taylor of Nottingham administers small doses of protoiodide of mercury in syphilitic iritis, and gives a favourable prognosis.*

Other Works by the Author.

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CASES OF SYPHILIS TREATED WITHOUT MERCURY
AT THE METROPOLITAN FREE HOSPITAL AND
FARRINGDON GENERAL DISPENSARY.

By Dr. Charles R. Drysdale and R. W. Dunn, Esq., M.R.C.S.

PRICE ONE SHILLING.

ALPINE HEIGHTS AND CLIMATE IN THE
TREATMENT OF CONSUMPTION.

By Dr. C. R. Drysdale,

PHYSICIAN TO THE NORTH LONDON CONSUMPTION HOSPITAL.

BAILLIÈRE, TINDALL & COX, 20, King William Street, Strand.

PREFACE.

It seems necessary for an author to make some excuse for writing another book about Syphilis; but perhaps it will be seen that I have some reason for doing so, when I explain my motives. In the year 1863, I published a pamphlet on the treatment of syphilis without mercury, which attracted a good deal of attention at the time, and had the pleasure of seeing it translated into German, by Dr. Hermann, of Vienna. The pamphlet was also translated, at my own expense, into French, and Dr. Alfred Fournier, in a most kind manner, assisted in correcting the press, and in thus making the views intelligible to the Parisian medical world. To this pamphlet, which was very soon out of print, I attribute in some slight measure the renewed interest in the question of the treatment of syphilis, evinced by the many discussions which took place in Paris, London, and Christiania, in the years which immediately followed its publication. The work was referred to in these discussions by such able men as De Méric, Bœck, and Deprés. An earnest study of the arguments made use of in these debates has only tended to confirm me in my opinion, that our immediate predecessors have taken too much for granted in the treatment of syphilis. I believe they have too blindly believed in the efficacy of mercury in *all* cases. Nay, I go further, and would ask whether the evidence contained in these pages does not warrant us in saying, that mercury is rather too dangerous a remedy to be used with safety in most cases of syphilis,

however it may prove of service in exceptional cases? For my own part, I do not treat any case with mercury, and yet find the disease for the most part easily treated by means of the compounds of iodine. When I wrote, in 1863, the pamphlet above referred to, I used to see many cases, similar to those referred to by Paget, (see p. 138,) where mercury and syphilis combined had irretrievably destroyed the health of the patient. I am bound to say that such cases are now rarely seen by myself, although one or two still haunt my consulting room, to remind me of the days when mercury was in the meridian of its popularity.

After reading over the mass of conflicting evidence contained in the following pages, no doubt unbounded toleration will in future be exercised toward persons who remain dissatisfied with the mercurial treatment of syphilis, and who content themselves with iodine and its compounds, conjoined with local applications in fit cases. For, when Paget and Henry Lee say that the internal use of mercury is often exceedingly injurious, and productive of immense evils, and when so many other persons of undoubted powers of observation treat syphilis without any mercury at all, it does seem needless to say that it can any longer be one of the dogmatic points of medical orthodoxy to administer it. Hence, in spite of the very high authority of Mr. Critchett, Mr. Jonathan Hutchinson, and Mr. Couper, I would not, as yet, myself feel heroic enough to give mercury, instead of iodide of potassium, in syphilitic iritis, or in amblyopia; and in spite of that eminent physician, Sir W. Jenner, I believe that iodide of potassium is more useful than grey-powder in infantile syphilis. The Christiania school now treats syphilis without mercury, whilst Dr. Hardy and Dr. Bazin use mercury in *all* stages of the disease, combining it with iodide of potassium in tertiary cases. The discrepancies, too, even among those

persons who use mercury, only prove how much has yet to be made out by discussion and patient investigation in this domain of therapeutics. "All silencing of discussion is assumption of infallibility," says the great modern master of the science of reasoning; and those who will favour me by reading these pages will, I sincerely trust, acknowledge that, even if I have failed to elicit much truth, I have at least *tried* to let all authorities have a fair hearing, the most difficult of all tasks even in this would-be *scientific era* of the world's history. Medicine is, perhaps, too difficult a science ever to be rendered very exact; but it will progress more rapidly, doubtless, whenever complete and thorough discussion of even the most unorthodox opinion is inculcated, not only as a privilege, but as a duty. Scientific truth differs from mere popular opinions in this, that it gives a standing challenge to all the world to disprove it; and the law of gravitation, or the efficacy of vaccination as a prophylactic against small-pox, &c., are never so sure of being thoroughly understood, as when assailed by friendly or unfriendly criticism, so long as brute force is not made use of to silence those who defend these or other acquisitions in positive science.

CHARLES R. DRYSDALE.

99, *Southampton Row, W.C.*,
London.
February, 1872.

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CHAPTER I.

ON GONORRHŒA.

This disease is now called Blennorrhagia by French writers, in order to avoid the inference that there is any seminal fluid lost, as the word Gonorrhœa would indicate. Gonorrhœa is a *special* inflammation of the mucous membrane of the urethra or vagina, and differs somewhat from urethritis, which is *simple* inflammation of the same membrane. As to whether the writers of ancient times were familiar with this malady or not, there is great difference of opinion. One writer, the late M. Auzias Turenne, believes that they were not; whilst others find notices of it in the book of Leviticus, &c. It is probable, the author thinks, that it has always existed; although it is certainly strange that such an unmistakeable affection should not have been minutely described by Celsus and Galen. Astruc is of the opinion that it was unknown to the ancients, whilst M. Ricord seems to be of a contrary opinion. Of all diseases, gonorrhœa is, perhaps, the most commonly met with in large cities. Probably six or seven cases of gonorrhœa occur to one of hard or soft sores, or even far more than this. Mr. J. D. Hill, of London, thinks that there may be, perhaps, six to eight cases of gonorrhœa to one of venereal sore, including soft chancre; and fifty cases of gonorrhœa to one of hard sore.

The most ordinary cause of gonorrhœa is contagion; indeed, some authors seem to think that this is the only cause of the malady. "When a man," says Cullerier, "comes to consult you concerning a gonorrhœa, a hundred to one he has contracted it from a woman." Mr. B. Hill says that "ninety per cent. of cases of urethritis, in either sex, are caused by contagion." M. Ricord, on the contrary, says "there is nothing more common than to find women, who have communicated the most acute attacks of gonorrhœa in the male, and who are only affected with a scarcely purulent uterine catarrh. Women frequently give gonorrhœa without themselves having it."

M. Alfred Fournier examined, on more than sixty occasions, women, from whom gonorrhœa had been contracted, and came to

the conclusion that most frequently gonorrhœa does not arise from contagion, but is caused by other means, such as venereal and alcoholic excesses; to which he adds the pathological discharges of women, and even the menstrual flow. Mr. W. F. Teevan is of opinion that "it is impossible to say whether a given discharge in the male or female is specific. Some of the most virulent gonorrhœas are given by women suffering from leucorrhœa. Undue acidity of the natural vaginal secretion will give gonorrhœa." Mr. H. Lee (edition 1871, vol. II., page 328) says, "it seems certain that gonorrhœa in the male may arise from intercourse with a woman in whom no changes in the genital organs can be detected upon minute examination with the speculum."

Sometimes we can find absolutely nothing the matter with women from whom men have contracted acute gonorrhœa; at other times we find urethritis, vaginitis, ulceration of the uterine neck, &c. Affections of the female organs which develope muco-pus are most likely to cause gonorrhœa in the male. Still there are cases where gonorrhœa seems to arise without any very special irritant in the female organs, and it appears that it occasionally, though very rarely, even developes itself in husbands after connection with their wives, who are, to all appearance, quite healthy. Mr. W. F. Teevan says that "marital urethritis gets well in from three to six days *sponte suâ*." Injections of irritating fluids and the passage of catheters have sometimes been known to produce a virulent discharge; but, according to Mr. J. D. Hill, this discharge soon subsides when the cause is removed, and does not, in his experience, require any local treatment, by injection or otherwise. Gonorrhœa, however, is not probably any very specific inflammation. Persons who have suffered from an attack of the malady are very subject to relapses when they commit the slightest excess. It is for these reasons, that chancres are so much more frequently received from women of the streets than gonorrhœa is; which, indeed, is contracted very frequently, it is alleged, from excessive intercourse with even perfectly healthy women. M. Fournier, for instance, found that, out of eight hundred and seventy-five cases of syphilis, six hundred and twenty-five had been received from public women; whilst out of three hundred and eighty-seven cases of gonorrhœa, only some fifty were said to have been contracted from prostitutes.

A short period elapses between the hour of contagion and the appearance of the discharge. Some say that this is a "period of incubation;" others, that it is merely analogous to what happens

between the time of catching cold and that of the appearing of the bronchial or rheumatic affection which ensues. However this may be, the author has generally found that some four or five days elapse after infection before the discharge appears. Mr. J. D. Hill has noticed it on the fourth day in a hundred cases, on the third day in fifty cases, and on the fifth day in fifty cases. A surgical friend has mentioned that, in his own person, gonorrhœa did not appear for more than three weeks. The author suspects that in this case there must have been syphilitic infection. Even the period of four to six days generally observed is quite notable, and is very different from what occurs in the case of catarrh following on cold feet or chill, which almost always comes on in a few hours.

The invasion of the complaint is usually revealed by a sensation of tickling at the end of the penis, and abnormal feeling of heat on micturition. The lips of the meatus are glued together by opaline mucus, and are red and inflamed. After a little while, the meatus becomes more red, the heat of the urine greater, and the discharge becomes yellowish, and subsequently yellow coloured. In a few days after this, the discharge becomes of a greenish hue, the erections painful, preventing sleep, especially at the latter part of the night, and the penis and glans become swollen. After this acute stage has lasted for a few days, it gradually declines in severity; the erections become less painful; and, lastly, the discharge alone remains, changing into a catarrh, which gradually disappears. In the acute stage, the prepuce is sometimes œdematous. In some cases the pain felt in micturition is very great indeed; so that patients urinate as rarely as they can, in order to avoid it. Sometimes absolute retention occurs, and Mr. J. D. Hill, of the Royal Free Hospital of London, had, in the month of May, 1871, occasion to puncture the bladder by the rectum, on account of retention in the acute stage of gonorrhœa, as no catheter could be passed, and the bladder was greatly distended with urine. Such a case, however, is most rarely met with. Most generally there are no constitutional symptoms observed, and gonorrhœa remains quite a local affection.

The affection commences near the meatus, and proceeds from before backward to the spongy, membranous, and prostatic portion of the male urethra. M. Desormeaux says that, on endoscopic examination, he has found the inflammation on the eighth day extending through the anterior half of the canal, the mucous membrane being reddened and without polish, and with superficial ulcerations. In older cases the same lesions are seen further

up the canal, in the bulb, membranous portion, and prostate. After a certain time, the inflammatory appearances become localised in a more or less extended portion of the mucous membrane of the urethra. In old gonorrhœas, however, the localised inflammation is apt to insinuate itself into the follicles of the urethra, and extend to the subjacent parts, thus causing thickening and induration. The author agrees with Mr. H. Lee, that "if the cause of gonorrhœa in the male be a morbid fluid from a syphilitic woman, there seems no reason why he may not get syphilis from it." Several cases of tertiary syphilis in the male have seemed to arise solely from gonorrhœa as a primary source of infection.

In very fortunate cases, and when well treated, gonorrhœa may last but a week or two, in others it lasts two or three months; but whenever it has shown a tendency to chronicity, there is no knowing how long it may last; so that we meet with gonorrhœas which have continued for many years. It is the gleet, which remains after the cure of many acute cases, which is so difficult to remove. Remedies, in such instances, seem to have no effect. Again, as a general rule, the first attack of gonorrhœa is acute and painful, but is usually easy of cure. Subsequent attacks, however, are far more difficult to manage; relapses, too, are very frequent under these circumstances, on the occasion of the least error in diet, even after the running has ceased for a week or ten days; although Hunter's assertion, that "the relapse may take place after the running has ceased for a month," is rather doubtful. Sometimes the use of injections is very ill borne by the urethra, and the discharge becomes serous and mingled with blood; whilst dysuria, and even retention of urine, may ensue. As to gleet, this is a very common affection, even among persons who do not suspect its existence in any way, and it must not be confounded with chronic gonorrhœa. In the latter, the discharge remains purulent, yellow, and rather abundant; whereas, in gleet, there is but little pus in the discharge, and the canal is merely made moist by a slight colourless viscous fluid, seen in the morning. In France, this is denominated the *goutte militaire*. Any fresh contagion will arouse acute symptoms in a man suffering from chronic gonorrhœa, but the complaint gradually dries up, and eventually becomes gleet; gleet, however, may continue for the life-time of the individual. In such cases, stricture of the urethra must be sought for, and the *bougie à boule* is of service in discovering the hidden stricture. It must be kept in mind always, that gonorrhœa, even when chronic, is, in some, quite

innocent of any evil effects; whilst, in others, stricture, thickening, and ulcerations of the mucous membrane, may all be the consequences of a chronic case. Mr. W. F. Teevan says, that "after a gleet has lasted six months, the endoscope and *bougie à boule* will always show pathological changes." Gleet, when not a symptom of stricture, is usually of but little clinical importance.

In treating gonorrhœa, we must remember that all soxual excitement exasperates the disease, and that even seminal emissions frequently aggravate it. The use of alcoholic beverages, such as beer or spirits, is often most injurious. All excessive exercise, such as riding, dancing, &c., must be avoided. Want of sleep is prejudicial. In France, the use of antiphlogistics is often too prolonged; and it must be remembered that too much barley-water may be drunk, and that far too much cubebs may be partaken of; if, indeed, such remedies should be used at all. Injections, too, when ill chosen, may aggravate, instead of curing, the disease. The greater number of gonorrhœas the patient has suffered from, the more difficult will it be to cure him; and, in cases of narrow orifice of the urethra, there is often a considerable difficulty in treating gonorrhœa well. Gonorrhœa is sometimes partial, *i.e.* it only attacks a limited extent of the urethral canal; and occasionally the discharge ceases of its own accord, without the use of any remedies, or even after great excesses have been indulged in.

It is now well known that the cause of gonorrhœa is the urethral mucous membrane being red and injected, sometimes only to a limited extent, as in the fossa navicularis, or in the membranous or prostatic region of the urethra. The use of the endoscope has been peculiarly valuable in respect to the information it has afforded on this point. Sometimes, however, in cases of gonorrhœa, the urethra seems after death to be almost healthy. Besides the redness and swelling of the mucous membrane, in one or two cases small granulations have been noticed in the lower wall of the prostatic region, resembling granular conjunctivitis. This is denied by Dr. Dick, of London, and by Mr. W. F. Teevan. Ulcerations are not met with, *i.e.* loss of substance of the mucous membrane, but exfoliation of the epithelium is sometimes noticed. This reminds us of what is seen on the os uteri in the female, in cases of non-cancerous, or so-called ulcerous, affections. In chronic gonorrhœa, the colour of the mucous membrane becomes more dusky; and, in some cases, excoriations, and even ulcerations, of the urethra may take place, or granulations or various disorganisations of the membrane may arise, the membrane

becoming thickened, less elastic, firm, and even quite leathery or hardened. Sometimes, but rarely, these indurations extend through a great portion of the spongy part of the canal; at other times they are merely ring-like. They are made up by the normal tissues becoming infiltrated with pathological products, analogous to exudations in other regions. The mucous membrane becomes sometimes twice, or even four times, as thick as it is in health; hardened, and resistant. Sometimes we notice urethral bridles, the origin of which is not quite clear. Desormeaux speaks of urethral granulations, or inequalities of the surface of the mucous membrane, of a mulberry aspect, from the size of a mustard seed up to a millet seed. Only one of such is seen by the endoscope; and they are very apt to lead to stricture of the urethra. Practitioners are too apt to consider as gonorrhœa all cases of suppuration from the urethra, but we must remember that pus evacuated from the male urethra is not necessarily the consequence of gonorrhœa. The prostate, seminal vesicle, or neck of the bladder, may, indeed, be the source of the pus; and, hence, some care is required in ascertaining the history of a case of gonorrhœa. Chancre in the urethra, or simple urethritis, may cause discharge of pus. Generally speaking, we may say of gonorrhœa, that it is most frequently an affair of little moment; but that sometimes it is serious, although very rarely likely to lead to incurable lesions. The chronic continuance of clap may lead to grave results, and especially to urethral stricture, which may end in fatal affections of the urinary passages and kidneys in the male sex. In this aspect, gonorrhœa is a most important disease in the male.

With regard to the treatment of gonorrhœa, the first point is that which refers to the remedies called by some "abortives." If we could at once put an end to gonorrhœa in all cases, it would be a very great triumph of therapeutics; since, as Ricord truly observes, the accidents which follow gonorrhœa are in direct proportion to its duration. The idea proposed in abortive remedies in clap is that of substituting an ephemeral and *simple* inflammation, in place of a *specific* inflammation of the urethra; and, to this end, irritating injections, such as ten or fifteen grains of nitrate of silver to an ounce of distilled water, are used. This practice is not unfrequently followed at present by Dr. Mauriac, in the Hôpital du Midi, at Paris. One injection is occasionally sufficient, according to some, but this must be repeated daily, if necessary, for a time. When such injections are made, the pain is at first considerable; the

meatus swells, as well as the penis, and there is a serous or sero-sanguinolent discharge, with much pain in micturition on the first occasion. This is followed by a yellowish discharge, lasting some twenty-four hours, which then diminishes, in successful cases, and becomes suppressed in a few days, when a cure takes place. Mr. Jonathan Hutchinson, of London, has recently seemed to sanction this practice, by the remark, that, in gonorrhœa, as in conjunctivitis, the stronger the inflammation, the stronger should be our irritating lotions to cope with it. It must be confessed, however, that, in some cases, the consequences of these very concentrated injections are rather awkward, and the inflammation and pain they excite rather distressing to the patient. Œdema of the prepuce and great pain in micturition may ensue among other effects. The accidents that may arise, such as cystitis, orchitis, or retention of urine, are, however, not often of any real gravity; and the practice is not to be blamed for causing stricture, or other lesions of the canal. Such abortive remedies, are, of course, used at the outset of the disease. Injections of several grains of chloride of zinc to an ounce of water may also be used, with the same view, *i.e.* of cutting short the inflammation. If this plan be adopted when the discharge is only some days old and not at its acme, it is often successful. Even if, on the second or third day, the pain and other symptoms are not very acute, it should be adopted. It is not necessary to throw the injection far into the canal in such cases. The urethra may be compressed some three inches down, so as to prevent the injection going further than the inflammation is likely to have extended. Thus, cystitis or orchitis will not be likely to occur. A kind of syringe has been devised and used by Mr. A. Durham, of Guy's Hospital, London, which is passed into the urethra, further than the inflammation is supposed to extend; and so constructed that, when the piston is pushed down, the injection is thrown towards the meatus. This mode has been much practised at the Hôpital du Midi lately by Dr. Mauriac. On the continent and in this country, it is still the custom, among many elderly practitioners, to prescribe, at the outset of the disease, large quantities of balsamic remedies internally. As much as an ounce of cubebs or copaiba daily is prescribed at first, by some French practitioners, so as to "strangle the disease at its birth." This is continued for six or eight days, in decreasing doses, and then abandoned if not successful. Some say that this plan often fails, and, as it is a most

unpleasant kind of treatment, it probably will never again come into vogue in this country.

Mr. W. F. Teevan says, "I never use medicine internally except there be direct indications. I have known patients' digestive organs destroyed for life by copaiba." His favourite injection is two grains of tannin to a drachm of water; but, before he orders an injection, he guages the sensibility of the urethra by throwing in some injection, and gradually increasing the strength. M. Ricord used to be greatly in favour of balsamics, associated with astringent injections, as a method of aborting the disease at its birth. The injections made use of by M. Ricord are those of half a grain of nitrate of silver to an ounce of distilled water, or of thirty grains of sulphate of zinc with thirty grains of acetate of lead in six ounces of water. Another injection, approved of by the great "master," contained, in six ounces of distilled water, fifteen grains of sulphate of zinc, thirty grains of acetate of lead, with one drachm of tincture of opium, and one drachm of tincture of catechu. These injections are directed to be used thrice a day, and retained about three minutes in the canal. This treatment is kept up some fifteen days, until a cure is effected, which is often the case. Large doses of cubebs are ordered at the same time. But A. Fournier, a pupil of Ricord, says it failed oftener than it succeeded; so that, according to that writer, this plan of treatment must not be continued for longer than a week, if it do not prove successful. Mr. B. Hill says that "any injection that smarts is not the right one, and is too strong." He recommends a syringe made by Hawkesley, Blenheim Street, London ("Lancet," April 29, 1871). Mr. L. Parker uses weak injections of half a grain of sulphate of zinc to an ounce of distilled water. It must be remembered, that the habits of the patients have much to do with the success of any line of treatment of gonorrhœa. Continence must be absolutely observed, and kept up for at least a fortnight after the discharge ceases; whilst all venereal excitement, such as the frequenting of balls, theatres, &c., should be studiously avoided. Coffee is injurious, and all alcoholic fluids, especially beer. Violent exercise of any kind is most injurious. A suspensory bandage should be worn to brace the testes well up toward the abdomen, and the parts should be kept scrupulously clean; whilst the patient should be warned of the great danger to sight, which may result from putting his fingers to his eyes after handling the organ. Some persons, at the outset of the acute symptoms of gonorrhœa, give barley-water to drink, and bicar-

bonato of soda, as in the prescription used by Fournier :—one drachm of bicarbonate of soda, with an ounce of sugar, and two drops of essence of lemon, dissolved in a quart of water, as a drink during the day. Mr. Weeden Cooke, late surgeon of the Royal Free Hospital, in his excellent pamphlet on Gonorrhœa, recommends a somewhat similar plan of treatmont. Warm baths are useful; but, truly, it is an awkward idea, that tho patient may spread the contagion to some other person's eyes by the use of a public bath. Some French authors advise the use of leeches to tho perinæum in the acute stage. By using such antiphlogistic remedies alone, it seems that a certain number of patients get well. Ricord says, that "injections are, as a general rule, hurtful in the acute period of the disease." Since the use of chloride of zinc in injections has come so much into vogue in London, this dictum has been found not to havo so much weight as used to be supposed. In some cases of painful micturition, in the acute stages of gonorrhœa, the patient is much solaced by passing water into a utensil nearly full of very cold water. Mr. Milton, of London, in his pamphlet on Gonorrhœa (page 21), advises the patient in the acute stage of gonorrhœa to foment the penis with very hot water. For chordee and nocturnal erections, a number of remedies, such as camphor, bromide of potassium, and others, have been recommended; but they are not of much use. Mr. J. D. Hill has found a pill containing one quarter of a grain of extract of belladonna, one grain of camphor, and two of extract of hyoscyamus, useful, taken at bedtime. Morphia or opium is far more efficacious, in doses of one-third of a grain of acetate of morphia in a pill at bed time, or used as a suppository into the rectum ; or an enema of twenty drops of laudanum at night is very useful. Mr. Teevan, of London, uses a suppository of five grains of camphor with two of opium, and advises the patients to sleep with many pillows below the head, and with the rectum and bladder empty. The patient must avoid all sexual excitement, and sleep cool and on the side; also micturate whenever he awakes. The decoction of uva ursi or infusion of buchu may be drunk when the disease is at its acme.

When the acute stage has passed by, many persons administer large doses of the balsams, such as copaiba, cubebs, matico, &c. The first two of these are the most useful. French writers recommend that such internal remedies should not be used, so long as there is much pain in micturition. The dose of cubebs is from half an ounce to an ounce daily ; that of copaiba, three drachms.

The taste of both of these horrible drugs is most nauseous; and this is, perhaps, one of the causes why able men in London so very seldom prescribe them in gonorrhœa. Copaiba should only be taken in capsules, and procured of the most honest druggists; and cubebs is only bearable when made up into balls by the help of some adjuvant, such as the syrup of tar used for that purpose in Paris. Mr. Chance, of the Metropolitan Free Hospital of London, uses thirty drops of balsam of copaiba with thirty drops of liquor potassæ in gonorrhœa. At the Hôpital du Midi, in Paris, one of the prescriptions for gonorrhœa is as follows:—Cubebs, two and a half drachms; copaiba, forty-five drops, in as much syrup of tar as is required; to be made into balls, and taken in the course of twenty-four hours. Whilst this is being taken, patients are advised to drink very little. Such treatment often makes the discharge cease at once, but a cure can only be effected by continuing the medication some time, say a week or ten days. Mr. J. D. Hill says that he "sometimes, in desperate cases, uses the balsam of copaiba in doses of thirty drops in an ounce of infusion of krameria and half a drop of oil of peppermint;" although he very rarely uses anything except injections. The essence of santal-wood is preferable, in many respects, to copaiba, for delicate stomachs. It is given in capsules, each containing eight drops of the essence, of which ten may be taken in twenty-four hours.

The treatment by injections, is the great treatment of gonorrhœa. Some persons, and among others, the author, use injections at all periods of the discharge; and Mr. J. Hutchinson seems to argue ("British Medical Journal," 1870), that "the more grave the inflammation, the stronger ought to be the injections used." Fournier uses them only after the acute symptoms have subsided. Three injections a day at least should be used, the fluid being kept in the urethra three minutes, and this should be continued for a week after the discharge ceases. Nitrate of silver in the proportion of two grains to six ounces of distilled water, sulphate of zinc in the proportion of two grains to the ounce, or the liquor plumbi subacetatis in the proportion of one drachm to the ounce of distilled water, are admirable injections. M. Fournier is opposed to the use of tannin, alum, or perchloride of iron. Chloride of zinc, in the proportion of one or two grains to the ounce, first used by the late Mr. Lloyd, of London, is the favourite injection in London practice at present, and often cures gonorrhœa in a very few days. Injections of bismuth are not to be recommended. Mr. W. F. Teevan has a

syringe for deep injections; it only holds ten minims. The stem is six inches long, and five minims will, he says, paint the whole urethra from one end to the other. Injections do not cause orchitis or rheumatism, as some assert; and they have no tendency to cause stricture; they are, on the contrary, the best means of preventing it. Cystitis or prostatitis, however, may be caused by over-strong injections. In some cases, where gonorrhœa becomes chronic, it requires all the care of the medical practitioner to master the disease. Sometimes it happens that the patient is careless; but when this is not the case, the daily passage of a bougie is often a very efficacious method of conquering the malady. The instrument is left for five minutes in the urethra; and the effect is either to excite inflammation, in which case injections become more efficacious, or to modify the sub-inflammatory condition of the urethra advantageously. Mr. W. F. Teevan alleges that such cases are often really cases of stricture, which can only be discovered by the use of the *bougie à boule.*

Gleet, in the male, seems sometimes to resemble the uterine catarrh of women, and to be kept up by the weak state of health of the patient. In such cases, sea-bathing, hydropathy, &c., are the best methods of treatment. Injections, however, very frequently succeed in curing gleet; and the sulphate or chloride of zinc are the most useful. Ricord used red wine mingled with twice as much water, for an injection in gleet; and bismuth is useful in that disease, but the passing of bougies should always be tried. The urethra may, in very obstinate cases, be cauterised, either by injections, or by means of the endoscope. Mr. Teevan says "the *bougie à boule* tells us how to treat gleet. If there is induration, contraction, or even leatheriness, the case must be treated by gradual dilatation. If not, then, injections will cure the case." Nitrate of silver, in the proportion of three grains to an ounce, may be injected by means of a syringe, adapted to the end of a middle-sized catheter. Desormeaux introduces the sound, and touches the inflamed parts with a solution of equal parts of nitrate of silver and distilled water; but, somehow or other, his plan has been found too cumbrous to be carried out in practice in London or Paris. Hunter used electricity in gleet; but it is difficult to understand the *rationale* of this method. Some patients get well *in time*, who are refractory to all other influences.

COMPLICATIONS OF GONORRHŒA.

There are several accidents which may happen to a patient suffer-

ing from gonorrhœa; such as enlargement of the inguinal glands, and of the penile lymphatics, inflammation of the prepuce, prostatitis, and retention of urine, or abscess of the peri-urethral tissues. In addition to these, gonorrhœal rheumatism is met with; and, occasionally, gonorrhœal ophthalmia and rheumatic ophthalmia. As to the inflammation of the inguinal glands in gonorrhœa, it is usually very mild, unless aggravated by excessive exercise, in which case the cellular tissue may become infiltrated, and matted to the skin. There is, occasionally, suppuration of the glands, but this is easily treated by means of poulticos, &c. Such buboes very rarely suppurate, and when they do, in the male, the pus is never inoculable. In scrofulous constitutions, the glands in the groin may continue enlarged and suppurating. As to the penile lymphatics, they sometimes are inflamed, and, at other times, enlarge painlessly. The largest of the cords is on the dorsum of the penis. Such inflammations are easily subdued, and it is very rare that suppuration takes place. Sometimes the skin of the organ becomes of a rosy hue, and more or less considerably swollen, whilst the lymphatics are inflamed and enlarged. The penis sometimes becomes greatly enlarged, twisted, and so painful as to cause sleeplessness and feverishness; but a few simple remedies subdue this apparently serious condition in a few days. Sometimes, however, diffuse suppuration of the prepuce takes place, and the prepuce falls in grangrene, leaving the gland naked, and visible through the perforation. At other times, there is hard induration of the prepuce. The treatment required is warm baths, with fomentation of the parts, and injections of nitrate of silver between the prepuce and gland, when balanitis exists. Incisions should be made when diffuse suppuration exists. Balanitis comparatively rarely occurs as a consequence of gonorrhœa. It is best treated by injections, between the prepuce and gland, of a ten-grain solution of nitrate of silver in an ounce of water. Mr. H. Lee recommends lime water as a lotion, or finely powdered calomel and calcined magnesia dusted on the parts. Phymosis results either from serous infiltration of the prepuce, or from inflammation. Paraphymosis takes place in cases where the prepuce is short. It is generally easily reduced by oiling the glans, and compressing it with the fingers of the right hand, whilst the left encircles the body of the penis. Sometimes the constriction must be cut through at the bottom of the furrow, or a narrow bistoury inserted beneath it, cutting upward. There is, too, sometimes, bleeding from the

urethra in the acute stage of gonorrhœa; and, in very rare cases, it may be necessary to inject a solution of perchloride of iron into the urethra. Bleeding from the urethra sometimes arises from the administration of carbonate of ammonia, according to Mr. J. D. Hill, of London. In cases of retention of urine, the patient must be placed at once in a warm bath, and laudanum injections used, before using the catheter; and in such cases a *gum elastic* bougie, gently introduced, is least likely to do any harm. The catheter must often be left in. In rare cases, the bladder must be punctured per rectum, or opened behind the seat of stricture, and a sound introduced into it. Very rarely the cavernous bodies become inflamed; at other times there occur abscesses in the tissues surrounding the urethra, opposite the fossa navicularis or the bulb. These must generally be evacuated as soon as recognised, when situated in the region of the bulb, otherwise the patient is exposed to urinary fistula and infiltration of urine if they open into the urethra.

In some cases, the glands of Cowper, which open into the bulb, suppurate, and an incision should be made to evacuate the pus as soon as formed. The seminal vesicles are said to be inflamed occasionally, but the symptoms of this disease are very obscure. The prostate may be either congested or inflamed in gonorrhœa. Connection, masturbation, or nocturnal emissions may produce the former, or the use of alcoholic beverages, or injections, the latter. The symptoms of congestion of the prostate are weight and pain in the perinæum, painful and frequent micturition, tenesmus, and great anguish. The prostate is felt to be enlarged, by introducing the finger into the rectum, and it is also sensitive to the touch. When there is abscess of the prostate, there is a feeling of burning, with pain in the perinæum, dysuria, pain in going to stool, with rectal tenesmus, and a feeling as if a foreign body were in the rectum. On passing the finger into the rectum, the prostate is felt to be enlarged and very tender, and when a catheter is introduced it is suddenly arrested; there is fever, anorexia, and insomnia. This state of things goes on increasing for six or seven days, and, if the case is favourable, resolution takes place in less than three weeks. At other times, suppuration takes place, and if this is evacuated externally, all goes well; but sometimes such abscess bursts into the urethra or rectum, leaving a cavity in the gland. Such cases are often very full of danger, and may wear out the patient. Prostatitis is apt to produce chronic hypertrophy in old men, and tuber-

culosis in the young. As to diagnosis, the examination per rectum, conjoined with catheterism, should never be omitted. As to treatment, warm baths, rest, and local blood-letting are all very useful. Fifteen to thirty leeches to the perinæum are indicated, according to the gravity of the case. The use of warm water enemata should not be neglected in grave cases, and incisions, if suppuration of the gland be diagnosed. Mr. H. Lee approves of the application of a solution of two drachms of the perchloride of iron in eight ounces of distilled water to the diseased organ locally, by means of a perforated catheter.

Cystitis is very common in the acute stage of gonorrhœa, especially at the neck of the bladder, on account of the extension of inflammation to that part. At first, the chief symptom is a frequent desire to micturate, with tenesmus, sometimes leading to incontinence of urine, pain with the last drops of urine, which are sometimes mingled with a certain quantity of pus, but rarely any rise of temperature. This seldom lasts for more than a few days, and is easily enough treated by rest, low diet, and enemata, with twenty drops of laudanum. It is rare that the body of the bladder is affected in gonorrhœa. Mr. J. D. Hill has found infusion of buchu invaluable in such cases.

Epididymitis is a very common consequence of gonorrhœa. Perhaps one in ten persons suffering from the disease, have swelled testicle. This accident does not generally come on until the gonorrhœa has lasted several weeks; and it sometimes appears in chronic cases. The inflammation of the urethra is the main cause, but it is more likely to come on in patients who have committed some excess, either in masturbation, connection, drinking, or exercise. The testis is almost always spared in the inflammation of the epididymis; which, indeed, is generally the only part of the organ affected. Generally speaking, only one epididymis is affected at first, and either right or left seems to be affected with equal frequency. The first symptoms of the affection is a dull pain in the scrotal region, with dragging at the cord and in the loin; also, according to A. Fournier, a pain about the groin, radiating towards the pelvic cavity. The testicle soon becomes painful and swollen, the scrotum injected and œdematous. The pain is often very distressing, and allows the patient no rest; it continues until the testis is swollen, and often is then appeased. The swelling is sometimes made very great by effusion of fluid into the tunica vaginalis, and, in such a case, it is very difficult to dis-

tinguish the testis from the epididymis; at other times, it is easy enough to distinguish that the epididymis and cord alone are inflamed. The latter is the symptom most frequently observed in practice. Sometimes the inflamed cord is felt to be as large as the little finger, and the peritoneum is also, in rare cases, affected by the inflammation, as well as the seminal vesicles. The inflammation of the tunica vaginalis follows that of the epididymis, and is often much benefited by puncturing the part distended. When the scrotum is œdematous, it is difficult to make out the condition of the gland beneath. There is usually some fever present in epididymitis, and the inflammation gets to its height in some four or five days, and then tends gradually to subside; but relapses are not rare if the patient is careless and fatigues himself. Resolution takes place slowly, in a month or two; but sometimes indurations of the epididymis may last an indefinite time. Suppuration is very uncommon, and so with atrophy. The observations of Gosselin of Paris, have shown that in epididymitis there are plastic deposits made in the interior of the little canals, or the cellular tissue surrounding them, most marked at the tail of the epididymis; and, long after the inflammation has disappeared, indurations persist, which usually gradually disappear; but they may always remain, and thus cause sterility of one testis, or complete infecundity, if both epididymes are inflamed. In the latter case, of which the author has seen many examples, the spermatic fluid is wanting in spermatozoa. The way in which gonorrhœa produces epididymitis is not yet clearly made out. In the immense majority of cases, epididymitis is not a grave affection; and it is only in the cases where, when double, it is followed by hard points in the tail, that it produces sterility. Generally speaking, all that the patient requires is rest in bed, with the testes raised up to the abdomen as much as possible, occasional brisk purges of Epsom salts, and linseed-meal poultices, or hot fomentations; or, if the patient will walk about, a well-made suspensory bandage. The tunica vaginalis, when much distended, may be punctured with a lancet, although some question the value of this proceeding, and prefer leeches. All plaisters of mercury, iodine, &c., are worse than useless, according to the author's experience, except when used instead of suspensory bandages, as proposed by Mr. Morgan, of Dublin, in the "Medical Press and Circular," of April, 1871. Tartar emetic, mercury, the application of ice or pressure, &c., are all, he thinks, needless; and, therefore, bad practice. Gonorrhœal orchitis

is very rare indeed, although it does occur, and is a very grave affair, as it may end in gangrene of the testis. In some cases of chronic gonorrhœa, according to Dr. Alfred Fournier, the epididymis becomes enlarged, so as to simulate tubercle of the part. It is important that this should be borne in mind.

In 1781, Swediaur spoke of gonorrhœa causing rheumatism; and in 1786, Hunter confirmed this view; yet some sceptics will still have it, that the occurrence of articular rheumatism, along with urethral gonorrhœa, is merely fortuitous. The author has seen too many undoubted cases of articular rheumatism brought on by gonorrhœa, to have any doubt upon this point. Patients come to consult the medical man, who, each time they have clap, are tormented with articular rheumatism. Cold and damp have little to do with gonorrhœal rheumatism; and women, as is natural, are infinitely less apt to have gonorrhœal rheumatism than men. The author, however, has observed several well-marked cases in women. One case, that of a prostitute, in whom the wrist joint was quite disorganised, was evidently due to gonorrhœa. According to Ricord, it is only in cases where the urethra is inflamed in both sexes, that we meet with gonorrhœal rheumatism, and it is never seen in mere vaginitis or balanitis. This consequence of gonorrhœa is rarely met with before the third week, and usually far later in the disease. This kind of rheumatism most frequently affects the articular synovial membranes, but it may also attack the muscles or the eye. M. C. Mauriac, of Paris, has written an interesting monograph on cases seen by him at the Hôpital du Midi at Paris. The knee joint is most frequently attacked, and the author has seen double arthritis of the knee in more than one case. The large articulations are most frequently attacked, although the smaller joints are so sometimes. More than one joint is usually affected. Sometimes there is effusion into the articulation; at other times, simply pain; at others, acute inflammation supervenes. One point for diagnosis is, that gonorrhœal rheumatism only extends to a few of the joints, not to all, as in ordinary rheumatism. The heart is not attacked in this disease. In rare cases, stiff joint may ensue, especially in the smaller joints. The best treatment probably is to blister and compress the diseased joint. Absolute rest of the part by means of splints is indicated. Iodide of potassium and vinum colchici are given internally, but the author has not seen much good effected by these remedies. A starch bandage is of use in the later stages, to keep the parts motionless. The cure of the gonorrhœa does not involve that of

the rheumatism. Sciatica is sometimes caused by gonorrhœa, and diplopia has been noticed.

There are two affections of the eye caused by gonorrhœa; the one being caused by the contagion from the pus of the urethra, the other connected with the rheumatic affection just described. The pus of gonorrhœa is often put into the eye in cases of pannus, and Mr. Critchett, of London, has been very successful in the treatment of such cases by this means. Fortunately, this severe effect of gonorrhœa is rarely met with in practice; only two or three cases a year were observed by Ricord. In this disease, there is a sudden invasion of very acute symptoms; lachrymation, abundant discharge of sero-purulent fluid from the conjunctiva, œdema of the eyelids, with spasm of the orbicularis, chemosis, periorbital pain amounting to anguish, effusion between the layers of the cornea, and a tendency to ulceration of the cornea. The eye may be lost in a few days by the violence of the inflammation. The prognosis is very bad in most cases of this disease. It must be treated with great decision. The conjunctiva is to be cauterised with the pencil of nitrate of silver repeatedly, and the eye-douche frequently applied. Atropia drop, four grains to the ounce, is to be frequently dropped into the eye. Incisions of the palpebral conjunctiva must be made. As to rheumatic affections of the eyeball, they are, doubtless, frequently caused by gonorrhœa, as pointed out by M. Ricord. Aquo-capsulitis is especially observed in such cases, and rheumatic iritis is not unfrequently met with; conjunctivitis is also seen. The prognosis of all these seems not unfavourable. As to the treatment of these ocular complications of gonorrhœa, there is not much to be said. Atropine may be used locally, in the case of iritis.

Gonorrhœa is a venereal disease, and is almost always acquired by sexual connection. It is a specific disease, and has, in almost all cases, no relation in the male with syphilis or soft sores. Hernandez, in 1812, first of all attacked the identity of syphilis with gonorrhœa, but Ricord was the person who definitely settled the question for the male sex, save in cases of urethral chancre. Some authors consider gonorrhœa a virulent disease, like syphilis, farcy, &c.; but there seems to be great reason to doubt entirely the truth of this opinion. It is probable that gonorrhœal pus only acts by irritating the urethra, for vaginitis or uterine catarrh will produce it in the male. Gonorrhœa, then, is not a virus.

STRICTURE OF THE MALE URETHRA.

According to the measurements taken by Sir H. Thompson, ("On Stricture," Lond., 1858,) the average length of the male urethra is seven and a half inches during life, as judged by using graduated catheters. When the parts are healthy, a No. 12 English catheter usually passes with ease. The narrowest parts are at the orifice and membranous portions. There is a permanent or sub-pubic curve in the urethra; this is said to form an arc of a circle three and a quarter inches in diameter. Kölliker has discovered that there are muscular fibres around the whole urethral canal, which accounts for the existence, in many cases, of what is called spasmodic stricture, which may take place in any part of the canal. The presence of stone in the bladder, long retention of urine, or excessive sexual exercise may all cause spasm of longer or shorter duration. Sometimes a patient, who during life has been said to have severe stricture, is found after death entirely free from this disease. Congestion may accompany spasmodic stricture and complicate it.

Sir H. Thompson's dissections prove that, at first, an organic stricture consists often of mere thickening of the mucous membrane, hardly noticeable after death. At other times, the membrane loses its transparency, and becomes adherent to the subjacent tissues, whilst transverse fibres surround it like purse-strings. In the most severe forms, the submucous tissue is filled with lymph, which may give the spongy body a hard, nodulated feeling. Of 270 preparations, Sir H. Thompson found 216 strictures in the subpubic curvature, 51 in the middle spongy region, and 54 in the anterior spongy portion. M. Mercier of Paris (Bul. de la Soc. Anatom., Paris, 1858) says, that strictures are most common at the bulb. Strictures are, indeed, rare in the prostatic region of the urethra. In 267 preparations examined by Thompson, stricture was single in 226: but as many as eight strictures have been noticed in one urethra.

Mr. J. D. Hill of London, in an "Analysis of 140 cases of Urethral Stricture," (Churchill, 1871,) divides strictures into single, multiple, complicated, and cartilaginous, or undilatable, Nearly one half are cases of simple stricture. Of 69 cases of single stricture, in 40,

the stricture was near the bulb, in 5, in the membranous portion, and in 10, in the spongy portion. In multiple strictures, the first constriction is usually about two inches from the meatus; the second, about half way between this and the bulb; and the third, about the bulbo-membranous junction. The character of the first and second of these is usually nodular; the third usually fusiform, varying from one-third to three-quarters of an inch in length, and in size from a pea to a marble. Such strictures have sometimes a history of twenty or thirty years' duration. A stricture may consist of a few fibres surrounding the canal like a thread, or it may be like a band. The former are called *linear*, bridle, or valvular. Mr. Teevan says that "eighty per cent of strictures are in the sub-pubic region, and they are usually *tunnel* strictures." Stricture may involve the canal to the extent of half an inch or several inches, and the urethra in these cases becomes irregular or tortuous. Some strictures, when dilated, rapidly contract again; these are called *resilient* strictures. Mr. Syme once used the expression that, if the urine passes out, instruments may always, with care and perseverance, be got in beyond the contraction. This is different from the case where a distended bladder requires immediate relief. He never contended in such cases that the introduction of a catheter was always practicable. Cases have been mentioned in which it required "six sessions of three hours each," before an instrument could be passed into the urethra. Dr. Cazenave of Bordeaux (Jour. de Med. et de Chir. May, 1871) says that, during twenty years' experience he has never failed to cure retention of urine by introducing a piece of ice, about the size of a chesnut, into the rectum. This is renewed, if necessary, in two hours, and is infallible, according to that gentleman.

The urethra generally becomes dilated behind the seat of the stricture; the mucous membrane, too, becomes inflamed, which often causes a gleety discharge from the urethra. Abscesses and fistulæ are not rare in such cases, opening, in some instances, into the urethra. Such fistulæ may open in the abdomen, the rectum, perinæum, or scrotum; or on the thighs, or nates. In cases where the urethra is impervious, the urine may escape entirely through these passages. The walls of the bladder become greatly hypertrophied in cases of urethral stricture, and the viscus is sometimes pouched or sacculated. The urine is apt to be decomposed; and hence the bladder becomes inflamed, thickened, soft, pulpy, and much diminished in size. The ureters and pelves of the kidneys are often much

dilated, whilst the medullary portion may become atrophied. The ejaculatory ducts may be enlarged, and the seminal vesicles are sometimes found to be filled with purulent matter. Rigors, inappetence, chilliness, pain in the perinæum, and hypochondriasis, are frequent concomitants of stricture of the urethra. A gleety discharge from the urethra, combined with frequent desire to pass water, is an early symptom of stricture. The stream is diminished in fulness and projected feebly, whilst it is at times spiral, forked, or flattened. There is often aching pain in the loins and perinæum, or behind the pubes. In bad cases, the urine constantly dribbles away, and the patient is often supposed to have incontinence of urine. Nocturnal emissions frequently occur from the irritation of the parts. In many cases there is impotence, and the patient may come to the medical man complaining chiefly of this symptom. The semen comes away too late, and this produces sterility in some cases. Retention of urine is frequent, after exposure to wet and cold, or after spirit drinking. Few sufferings can equal that of retention in cases of stricture of the urethra. Most generally it is the urethra which gives way behind the stricture. When such rupture takes place, which it does anteriorly to the triangular ligament, the effusion extends upward and forward into the scrotum and abdomen; when, unless free incisions be at once made, the parts fall in gangrene. Stricture, in by far the greater majority of cases, is caused, by gonorrhœa. Injury to the perinæum causes a small per-centage of the cases In gonorrhœal stricture, it is found that long continuance of urethritis is the most important factor; hence the importance of getting rid of gonorrhœa as quickly as is compatible with safety. Doubtless, the use of very strong injections, such as fifteen grains of nitrate of silver to the ounce of distilled water, often causes stricture, as in the practice of Lallemand, and his followers in London and elsewhere, in cases of frequent seminal emissions; but there is not the least reason to believe, that mild injections ever cause stricture: and, as they are the most rapid means of curing gonorrhœa, they are consequently the best means of preventing the occurrence of lesions which usually arise from chronic gonorrhœa. Chancres sometimes cause stricture. Subacute inflammation of the prostate and urethral hyperæsthesia are sometimes mistaken for stricture.

With regard to the instruments for exploring the urethra, it must be confessed that the English standard is a faulty one, as its No. 1 is too large, and the subsequent numbers advance too rapidly

up to No. 12. There are four sizes smaller than the English No. 1, contained in the French standard, called *Charrière-filière;* and No. 12 on the English scale corresponds with No. 21 of the French. In cases where a very small catheter is required for a tight stricture, it is better to use bougies or bulbous sounds, as there is then but little danger of making false passages. The English mahogany coloured bougies are rather too stiff, and not to be compared to the French black olivary bougies, so highly recommended by H. Thompson, W. F. Teevan, and others. Mr. W. F. Teevan of London (Med. Soc. of Lond., March 6, 1871) says, "The treatment of stricture may be summed up shortly thus: (1) gradual dilatation whenever practicable, by olivary bougies; (2) incision, whenever desirable; (3) external urethrotomy, whenever necessary." Filiform bougies are absolutely necessary for the treatment of stricture; and if always used, we should hear of fewer impassable strictures. The French *bougies à boule,* so much praised by Mr. W. F. Teevan, will detect very slight urethral contractions, (so will metallic instruments in the hands of a skilful man,) and are also useful in diagnosing how far down the canal the stricture exists. They are made of gum-elastic, and have a ball at the end shaped like an acorn. The recumbent posture is the best for the passing of catheters. The patient lies on his back with the shoulders raised, the knees drawn up, and the practitioner on his left hand. When the instrument has been slowly passed down to beneath the pubes, the shaft is brought round to the median line, and the handle elevated to the perpendicular and depressed between the thighs; if difficulty occur the left finger may be pressed behind the scrotum or passed into the rectum.

In treating stricture of the urethra, alcoholic liquids and tobacco should be avoided, and the patient should be careful in his diet. Flexible instruments, some say, are the instruments *par excellence* for the successful treatment of stricture by dilatation, unless the stricture is not very narrow, in which case metallic bougies certainly slip in very easily. Persons not thoroughly conversant with stricture, it is alleged, will do much less harm, if they confine themselves entirely to olivary bougies; but Mr. J. D. Hill says that soft bougies often cause false passages. A bougie should not remain long in the stricture, according to H. Thompson; and from two to four days should elapse before passing successive bougies. The dilatation should bo continued until No. 26 or 28 of the French scale can be passed, and tho patient should then be told to pass

an instrument for himself once a week for a time, and then once a month for years. Internal incision and rupture of stricture are, at present, much in vogue in London and New York, and this in the face of the fact, that several deaths have occurred from the use of Mr. Holt's instrument for forcible and immediate dilatation, and also from internal urethrotomy. It must be remarked, however, that death has not unfrequently been caused by the simple introduction of a catheter into the urethra, and, we must also remember, that a tight and irritable stricture will be exposed perhaps to greater danger, on the whole, by the repeated use of instruments for dilatation, than by a single operation of Holt's dilator, or by incision. When the patient has a very moderate stricture, too, the use of Holt's dilator is scarcely dangerous. Dr. Bumpstead of New York thinks that the result after immediate rupture is more permanent, than it is after gradual dilatation. Patients among the poorer classes (says Mr. J. D. Hill of London, who has performed this operation in a hundred and twenty cases of stricture recently, with only one death which could be put down to its use) are wont to disappear when gradual catheterisation is going on, suddenly enter some hospital after a time with extravasion of urine, and die. Dr. Maisonneuve's instrument is the best for internal urethrotomy. It consists of a grooved staff, with a screw point at its extremity, to which a filiform bougie can be attached. This latter is first introduced, and the grooved staff follows it into the bladder. The blade is then thrust down the staff, dividing any obstruction it meets. It seems, however, sometimes to incise the urethra, in addition to performing its legitimate task, and should not be used for strictures far back in the urethra.

Mr. Barnard Holt, in his work "On the Immediate Treatment of Stricture of the Urethra by the Employment of the Stricture Dilator," (London, 1863,) mentions that he had then treated two hundred and fifty cases by this process without any bad results, and affirms that he believes all practitioners must adopt his practice ere long. "Ordinary treatment of stricture," says Holt, "is tedious, occupying several months." In 1856 he commenced using his dilator, which "consists of two fixed blades, fixed in a divided handle, and containing between them a hollow wire welded to their points, and, on this wire a tube, which when introduced between tho blades corresponds to the natural calibre of the urethra." An instrument, almost identical with this, was advocated in Paris some years ago by Dr. Perrève, but seems not to have gained a footing in

that city. "The patient," says Mr. Holt, "should be directed not to make water for two or three hours before the instrument is introduced. This is," he continues, "a most simple operation, not attended with any serious mischief, giving immediate relief, and not confining the patient to bed for more than twelve to twenty-four hours, whilst the urethra is at once made of its normal calibre. It is available in all permeable strictures, and may be repeated, and is superior to cutting operations." Such are the expressions of the eminent surgeon of Westminster Hospital in his work. Mr. W. F. Teevan observes that Perrève's instrument was condemned in Paris, and that Sir W. Fergusson, Mr. H. Smith, and other able London surgeons, have abandoned its use, as it occasionally causes death from rupture of the urethra. He, therefore, uses olivary bougies in all cases in which Holt's dilator is used by its admirers. Mr. J. D. Hill agrees that rupture of the urethra is a serious matter; but alleges that a skilful operator with Holt's instrument will not rupture the urethra, but only the stricture. The question is not yet settled.

In certain persons, the simple exploration of the urethra by a bougie may provoke attacks of intermittent fever. These attacks are usually quotidian. Generally they are slight; but, occasionally, they may cause danger to life in a short time, as in some cases of marsh-poisoning. The practitioner must bear such cases in mind, and take great care to use as little violence as possible when exploring the urethra. The treatment of such paroxysms consists in the administration of doses of sulphate of quinine, in proportion to the violence of the attack; and the use of an antiphlogistic diet and regimen suitable to the case.

CHAPTER II.

GONORRHŒA IN THE FEMALE.

Much obscurity exists, both as to the diagnosis and the prognosis of gonorrhœa in the female sex. The multiplicity of causes which may produce mucous or muco-purulent discharges in the female, render the whole subject of gonorrhœa in that sex much more difficult to write upon, than when the male sex is spoken of. Gonorrhœa of the vagina is more common than that of the urethra or vulva, and gonorrhœa of the uterus is least common of all. Some say that contagion constitutes the essential character of gonorrhœal discharge from the vulva, vagina, or urethra; and few will be found to doubt this. It is pretty clear that we must call a discharge of such a kind gonorrhœa, when it will produce discharge in the male, or purulent ophthalmia in the patient herself; but, having admitted this, we have not advanced very far. It will be asked, Has the woman, who thus gives a gonorrhœa, necessarily been herself the subject of contagion from another person; or can she not give contagion, solely by the fact of her suffering from leucorrhœa, which may have arisen spontaneously, or from non-venereal causes? Some able medical men are quite undecided what answer to give to this categorical question. In a recent conversation with Mr. H. Lee, and also with Dr. Routh, of London, in 1871, the author found both of those high authorities in favour of the idea that gonorrhœa may be taken from any woman, however virtuous or free from symptoms she may be. Many, however, (according to Dr. C. Mauriac, of Paris, in an admirable note on this subject, in his translation of Dr. West's lectures,) who have had great experience, affirm that any woman, whose genital secretions communicate clap, has necessarily herself received gonorrhœa from an infecting source, and absolutely deny that specific gonorrhœa can arise spontaneously. It is quite true that, in the great majority of cases, this view of matters is well founded. Almost all male patients in London (hospital practice), who have come to the author with gonorrhœa, have obtained it from women who take but little precautions to avoid contagion. Still, as remarked before, there

seems to the author to be no permissible doubt at present but that Mr. H. Lee, M. Ricord, M. Fournier, and others, are quite right, when they assert that certain genital discharges from the female, where there is no reason to suspect gonorrhœa, do take on occasionally the principle which causes women to communicate that disease to the male. Dr. Routh asserted categorically at a recent examination before the House of Lords' Committee on the Contagious Diseases Acts, that any man might contract gonorrhœa from his wife, however chaste she might be. (See Blue Book, 1871.)

With regard, too, to diagnosis, when gonorrhœal inflammation has attacked the vulva, urethra, and vagina acutely, and when the parts are bathed with thick greenish pus, there is but little difficulty in saying at once, that gonorrhœa is present in the female, especially if we know the history of the case well. But when the inflammation subsides, and the discharge begins to be less purulent, and more or less of mucus only is poured forth, resembling ordinary leucorrhœa, we are often in very great difficulties. Many maintain that the persistence of urethritis is one of the best symptoms on which to base the assertion that gonorrhœa exists in a given case before us. Gonorrhœa of the urethra usually co-exists with vulvitis, vaginitis, and with perhaps inflammation of the os and cervix uteri; but it is said that it sometimes exists alone. The author had recently, in a case before the London Divorce Court, to base his diagnosis of the presence of the disease, to a great extent, on the presence of this latter fact. Urethritis, however, is sometimes caused by small growths in the urethra of the female; so that even this symptom is far from being pathognomonic. This has been pointed out to the author by Dr. Routh, in a recent conversation on this question. Trousseau, of Paris, also noticed that there were other varieties of simple urethritis. When this symptom is wanting, we have only the patient's own observations of her symptoms to guide us; and they, of course, are very unreliable. So that the author scarcely knows whether anyone would be justified in doing more than alleging, that he *believed* he had seen gonorrhœa in such a case. It would, too, be doubtless very important in practice, to be able to tell when a discharge from the vulva, urethra, or vagina, which was once contagious, had become innocent; but—and this is one of the weak points of all so-called medical sanitary inspections—there exists no positive symptom to guide us; even in syphilitic gonorrhœa, this is notably true. Of course, when the discharge is greenish or yellow, it is more likely to be contagious; but, even when there

is nothing more than leucorrhœa, the discharge may be most highly contagious; and it becomes more so at the menstrual period, or when sexual or alcoholic excitement is superadded. Pus, of course, is found in numerous vaginal discharges which are non-virulent. Thus we must fain say that there is great incertitude in the most important questions relating to gonorrhœa in the female. It is true, perhaps, that a very large per-centage of all cases of gonorrhœa in males are derived from women who have had true gonorrhœa. More than this the modesty of science forbids us to assert. Of course, inoculations of the suspected pus on the urethra of another person would tend to clear up the question partially; but such experiments are quite inadmissible.

M. Guerin, of Paris, in his excellent work on the diseases of the external organs of generation in females, asserts that he has noticed urethritis in almost all of his female patients who suffered from vaginal gonorrhœa; and, as before said, most persons agree that urethritis is the most certain symptom of gonorrhœa in the female. Urethritis, indeed, is a most rare affection in females who have not been in the way of contagion; even in little girls, who so often suffer from vulvitis. One reason why the existence of urethritis is often overlooked in the female is, that women suffer much less from this affection than men do; so that it is often necessary to press upon the urethra from the neck of the bladder forwards, in order to make a drop of pus issue forth, which otherwise would have remained unseen. When the urethra is inflamed, the introduction of a sound produces pain, and micturition is painful in most cases.

M. A. Guerin, of Paris, has described a form of urethritis as *external urethritis*. "This variety has," he says, "its seat in two little glands, which open close, but external to, the female urethra." Inflammation sometimes survives in these long after it has died out in the vagina and vulva; and when the registered women of Paris were anxious to avoid being recognised as spreading contagion, they were easily able to wipe away any pus that might be pouring from these glands just before being examined. Urethritis in women may occasionally, although rarely, be caused by hard sores in the urethra. The hardness of the inguinal glands might clear up this point in suspicious cases. Dr. Alfred Fournier, of Paris, in an excellent memoir on rheumatism in women, accompanying urethritis, mentions that, in a short time, he noticed seven cases of gonorrhœal rheumatism in women, as well marked and clearly made out as in men. All of these women suffered from

urethritis. He concludes that gonorrhœal rheumatism is less rare among women than people suppose, and that it is connected with gonorrhœal urethritis, and not with vulvitis or vaginitis. ("Ann. Derm. et de Syph. Ann." 1869). In 1861, Trousseau published in the "Bulletin de Therapeutique" an article, calling attention to the existence of simple urethritis in women; an affection characterised, he alleged, by a frequent desire to micturate, accompanied by a slight scalding; and commoner among married women than single ones. According to that author, at the moment when micturition commences, there is sometimes seen, first of all, a little glairy fluid at the orifice of the urethra.

In gonorrhœal urethritis in the female sex, cubebs and copaiba are of as great utility as in the male, when the inflammatory period is over; but, in the female sex, abortive treatment may be more energetically carried out by means of cauterisation of the urethra, by the pencil of nitrate of silver, introduced after emptying the canal of its mucus and pus, by pressing from behind forward on the urethra. This practice does not cause any retention of urine, and is exempt from all evil consequences. Many persons, at the same time, give cubebs, matico, or copaiba, to conquer the urethritis. It must, however, be remembered that, if vulvitis and vaginitis exist at the same time with urethritis, they must be treated simultaneously with it, or contagion from other parts will keep the inflammation alive. Injections into the female urethra are not so generally useful as in the male sex, unless the patient is well educated enough to know how to use them, since we can hardly expect them to be made by ordinary women; otherwise, doubtless, they would prove excellent practice.

Gonorrhœal vulvitis, which is rarer than vaginitis, may attack the whole of the vulva, or only a part of the labia majora or minora, and may be superficial or follicular. The follicles of the vulva pour out a thick purulent secretion in some cases. Abscesses in the neighbourhood of the vulva are common, and also in the vulvo-vaginal glands. The fluid which is secreted becomes rapidly purulent and yellow or of a greenish hue; it is gifted with such acridity as to cause redness and excoriation of the parts around it; there is often great fœtor in uncleanly women. This is the most painful species of gonorrhœa in the female. In cases where there is much œdema present, with erosions which bleed easily, similar to those in balanitis, it is sometimes by no means easy to say whether chancres do not exist, which may be the primary lesions of syphilis.

The glands of the groin should be examined carefully in such doubtful cases. Sometimes the ulceration of some of the follicles in gonorrhœal vulvitis may lead us to suspect that soft chancres are present; inoculation, in such a case, would clear up our difficulties. When gonorrhœal vulvitis is very acute, an energetic antiphlogistic treatment is often required. Linseed-meal poultices, fomentations, and baths, are all useful, and some persons recommend puncturing the labia minora with a small lancet in cases of œdema from gonorrhœal inflammation. The inflamed surfaces also may be brushed over with a solution of nitrate of silver, ten grains to the ounce, and then kept apart by pieces of lint dipped in solution of alum, two drachms to the pint of water. The parts should subsequently be frequently bathed with a lotion of sulphate of zinc, two grains to the ounce, whilst the patient must abstain from all alcoholic fluids. When the follieles of the vulva are inflamed, the pencil of nitrate of silver should be inserted into them, and this will often rapidly effect a cure. In acute cases, an excellent lotion to the vulva is one part of liquor plumbi subacetatis to six of decoction of poppies. Dr. Bumpstead insists that a pint of injection should be thrown up at a time, the patient lying on her back, with a bed-pan beneath the hips. The patient may, at hospitals, be supplied with the solid ingredients, one or two drachms of sulphate of zinc or of alum, to be mixed with a pint of water, and this to be diluted if the parts smart. Mr. M. Sims, of Paris, likes injections to be warm. Two drachms of alum, with one of tannin, in a pint of water, is a good injection in vaginitis and uterine catarrh.

Gonorrhœal vaginitis, the most common symptom in gonorrhœa, is sometimes co-extensive with the whole of the canal of the vagina; at other times, it only affects portions of the canal. It generally commences at the orifice, and travels backward. The lower part of the vagina is more or less affected in most cases of vulvitis, and it is said that the anterior wall of the vagina is most frequently affected in gonorrhœal vaginitis. It is occasionally observed that, when the inflammation is close to the vulva, the inguinal glands become inflamed, and may even suppurate. Of course, in this case, the secretion will not prove inoculable. When in the upper part of the vagina, the glands are not likely to be affected. The speculum should not be used in the acute stage of vaginitis, as its use is often very painful, and excites inflammation. When the vaginitis is acute, a part or the whole of the canal is red, hot, and dry, or bathed with creamy pus. Sometimes patches are seen, resembling the surface

of the skin after the application of a blister. Granular vaginitis is also met with, when the papillæ are very marked. There is pain in micturition. This acute stage rarely lasts for more than ten days, and then the gonorrhœa becomes chronic. In chronic vaginitis, the local affection is usually confined to the upper part of the canal, and is accompanied in many cases by uterine catarrh; and often this condition of affairs is kept up indefinitely if the treatment is not judicious. This fact is often never suspected until a woman, who was considered to be quite well, gives a gonorrhœa to a man. The speculum will then show, perhaps, thickening of the mucous membrane of the vagina in the posterior cul-de-sac, with dark red coloration, denudation of the epithelium, which covers the surfaces of the os uteri and its neighbourhood, with uterine catarrh from the inflamed cervix. Very frequently, too, ulcerations are observed occupying the margin of the os tincæ. These are merely superficial epithelial erosions of the cervix. In short, these appearances resemble those seen in certain uterine catarrhs of simple or non-gonorrhœal origin. But, then, it may be asked, Would not a woman with such appearances be likely to give gonorrhœa to her husband? The reply is by no means very satisfactory. As to what is styled granular vaginitis, it is sometimes caused by gonorrhœal contamination, but also frequently arises from other causes, such as pregnancy, or uterine catarrh. In gonorrhœal cases, the colour of such granulations is vivid red. Dr. Tyler Smith, in his admirable, although incomplete, monograph on "Leucorrhœa," has shown how often obstinate uterine catarrh is caused by gonorrhœal inflammation; and this uterine catarrh, in its turn, often keeps up the inflammation of the neighbouring parts by the fluid poured out upon them from the congested cervix.

At the commencement of vaginitis, we may use baths, slight purges, and repose, &c.; but whenever the most acute symptoms are over, energetic therapeutics should be proceeded with. As an injection, we have nothing better than two drachms of alum with one of tannin in a pint of water, thrown up, while the patient is in the supine position, with a syringe pushed up into the posterior cul-de-sac. A solution of the chloride of zinc, of the strength of two or three grains to the ounce of water, is the favorite injection of some in vaginitis, as also in gonorrhœa in the male. A plug of cotton-wool, dusted over with powdered sugar and alum, may be left in the vagina for twelve hours, or a plug of cotton-wool saturated in the tannate of glycerine (one drachm of tannin to the

ounce of glycerine) of the British Pharmacopœia. The whole of the vagina, also, may be brushed over with a solution of nitrate of silver, one drachm to the ounce, or the solid stick used over the whole surface, or the tincture of iodine may be painted over it. Dr. Lombe Atthill, of Dublin, recommends the use, in vaginitis, of infusion of tobacco as a lotion. This is made by infusing two drachms of the unmanufactured leaf in a pint of boiling water, which should be injected, he says, into the vagina by one of the continuous syphon syringes manufactured by Maw and Son ("Medical Press and Circular," June 21, 1871).

Gonorrhœa often relapses in women, because some slight point of inflammation remains active; so that the practitioner must take care to attack every part in treating cases of gonorrhœa in the female. It must be remembered that purulent ophthalmia is as dangerous in the female as in the male, and female patients should be warned of the dangers likely to result from carrying their fingers to their eyes. The inflammation of the vagina is carried onward, in many cases, to the cervix uteri and body of the uterus, just as, in the male, the prostate gland is attacked in some cases. When gonorrhœa is uterine, or from the lining membrane of the body of the uterus, there is often great pain felt; as in the case of a lady recently under the care of the author, who contracted it from her husband, also a patient of the author's at the same time. It also attacks the ovaries, as has been well pointed out by MM. Bernutz and Goupil, and others, in a manner analogous to that in which the testis is attacked. Pelvic peritonitis is in many cases caused by gonorrhœa, and sterility in prostitutes is, doubtless, very frequently indeed due to the disorganisation of those delicate organs, the ovaries, and their peritoneal surroundings, by inflammation. Dr. Wilks, of Guy's Hospital, London, indeed, in a private note to the author, has expressed an opinion as to gonorrhœa being the chief cause of the notorious infertility of prostitutes; and not, as surmised by Acton and others, the excesses to which they abandon themselves. Pelvic cellulitis is also seen in cases of gonorrhœa.

A distinguished writer, Dr. Bumpstead, of New York, states that the causes of gonorrhœa in women, independently of contagion, may be enumerated as follows:—"Immoderate sexual intercourse, violence, masturbation, the presence of vegetations, syphilitic or other eruptions, errors of diet, ascarides in the rectum, and the external influences of cold, moisture, &c." Vaginitis may be caused by scarlatina. A most important point in state medicine is the

question of vaginitis in young female children. This is almost always a merely constitutional affection, and occurs in delicate children from some irritating cause or other, such as teething, ascarides, or the like. It is said by Dr. Bumpstead, "that the pus in such cases is contagious, if applied to the conjunctiva of the eye." This is very likely; but the author is not certain of its truth.

In gonorrhœa of the uterus, it is occasionally useful to dilate the os uteri by means of sea-tangle tents; after which the cavity of the cervix should be well touched with tincture of iodine, strong solution of nitrate of silver, or the solid stick; or, better still, with a film of nitrate of silver on the end of a uterine sound. This should be done at least twice a week, as the disease is often severe and obstinate. At the same time, some writers recommend the administration of cubebs or matico internally; but the author cannot say that this has proved of any utility in his practice. Leeches may be applied once or twice a week to the cervix uteri when it is much congested, and treatment in cases of gonorrhœal cervicitis must be very active and long continued in order to prove successful. Intra-uterine injections do not appear to be dangerous when the cervix is well dilated; but a cure can, the author thinks, be almost always effected without their aid.

It would be hardly fair to leave the subject of Gonorrhœa in the Female without adverting to the views recently put forward by Mr. John Morgan, of Dublin. In a pamphlet called "A new View of the Origin and Propagation of Venereal Disease, 1870," Mr. Morgan says, "it appears that the product of the vaginal discharge of a patient suffering from syphilitic infection, is a chancroid or soft sore, when the discharge is introduced under the skin or applied to an abraded surface." He adds that, "a more remarkable power possessed by this vaginal secretion is the production of a chancroid by inoculation on the patient's own person;" and that he has on several occasions taken the secretion as wiped from the os uteri and inoculated with it unsuccessfully, while from the vaginal discharge he has succeeded. He has also inoculated from the vaginal secretion of cases of uterine ulcer, and from the ulcers themselves without any result. He adds, and the author can bear his own testimony to this, that he has also "inoculated without result from the gonorrhœal discharge of the male." Mr. Morgan remarks that it seems necessary that the patient "be suffering from the earlier stages of constitutional infection, whether as yet latent or undeveloped, so as to be capable of transmitting a sore by inoculation from the vaginal

secretion." This is a very important point in the doctrine of the chancre, for M. Ricord, in his "Lectures on the Chancre," page 44, says that "a person with syphilis, who contracts a soft sore, may by means of this transmit syphilis." There exist already, according to Ricord, as quoted by Mr. Morgan in page 8 of his pamphlet, "a certain number of observations which tend to prove that the soft chancre of a syphilitic subject may also transmit itself in its own species, that is to say, as a soft chancre;" and Mr. Morgan remarks that, in all the inoculations he has recently made, the product from the artificially generated chancroid was a chancroid, though generated from and on syphilitic subjects. "The same discharge from the vagina," he says, "would succeed in some cases and not in others; and, though failing to produce a specific pustule one day, it would succeed on another." The following case is cited by him, and may serve as an example of what he has observed and narrated; it is contained in page 8:—"On the 23rd of May, the first auto-inoculation was performed from the patient's vaginal secretion. The patient was intensely affected with syphilis, and her vaginal discharge was inoculated sixty-three days after her admission, causing the appearance of a chancroid. On June 20th, twenty-eight days after the first inoculation, and from two to three weeks after the healing of the primary sore, he successfully inoculated another patient infected with syphilis, from the vaginal discharge of the same patient." Mr. Morgan says with truth that "this is to be borne in mind, with respect to the conduct of inspections under the Contagious Diseases Acts, as it might be supposed that freedom from primary or actual sore obtained freedom from contagion, yet a vaginal discharge in a syphilitic patient might be overlooked." Of course, these experiments of Mr. Morgan's are too recent to have been tested by other careful observers; and it is scarcely possible to say what may be the effect if the facts he narrates are proved to be consonant with nature. In two instances in syphilitic women, the author has tried the effect of inoculation of gonorrhœal discharge quite recently, without any chancroid being produced; but in another, made before that time, a pustule formed. It is premature to make any further remarks on the interesting cases cited by Mr. Morgan; they will, doubtless, soon be carefully repeated by others now that continental wars seem over for a time, which all lovers of human happiness may trust will be one of lengthened duration, although the future looks gloomy indeed.

SYPHILIS.

Modern doctrines concerning the nature, and even the origin, of syphilis are continually changing. No sooner do we think that we have realised, in our mind's eye, some clear picture of the series of phenomena of this disease, than some new observer proclaims how that he has witnessed another series of facts to enrich the literature of the subject withal, and which, on investigation, prove to be revolutionary and unlooked for in their results. Such being the case, it cannot be deemed wrong in any one, if he desire, to go through a few of the moot points, and attempt to arrive at some conclusions, permanent or temporary. Both physicians and surgeons may now-a-days take a share in the debate concerning syphilis; for neither the one nor the other of these rather arbitrary divisions of the domain of medicine can be said to be likely to see the whole of the drama of syphilis played out, without caring to hear what the experience of the other is. In Paris, of late, this has been found so true, that physicians, instead of surgeons, now hold the majority of the posts in the venereal hospitals. Operative surgery of a formidable character is so seldom called for in cases of syphilis and gonorrhœa, that it has been found more rational to require a little surgical skill from the physicians of the hospitals of the Midi and Lourcine, than to employ an operative surgeon for patients in whose treatment, in the great majority of cases, drugs and hygiene are alone necessary. In all probability, opinion in this country will soon follow this example, especially as medical men are aware that, of late, some of the best monographs on syphilis have been written by gentlemen who, like Dr. Wilks, Sir W. Jenner, and Dr. Hughlings Jackson, do not occupy themselves with operative surgery, but are simply physicians.

ORIGIN OF SYPHILIS.

Somehow or other, men are never satisfied that they have a satisfactory idea of the causation of any virulent disease, until they are able to assert fearlessly that it has had its origin at some distinct recent, or far off, epoch : and is not liable, like typhus, to appear at any time, through influences which are continually at work where want is met with, and its hideous concomitants, over-crowding, female degradation, and abandonment of cleanliness and care of the common decencies of life. With all that has been written (and there has been no lack of research on this point) the author cannot confidently affirm that he has made up his mind as to whether syphilis existed among the ancient Greeks and Romans, or whether it was a new poison introduced into Europe at the end of the fifteenth century. From the medical works of Dr. Francisco Lopez de Villalobos, so well and cleverly translated recently by Mr. Gaskoin, we find that this Spanish court physician believed that the disease, which he describes as the "contagious and accursed bubas," arose in Spain in the reign of Ferdinand and Isabella. The year of the publication of the work of Villalobos was that in which, says Mr. Gaskoin, Charles VIII. died, after his tremendous raid into Italy ; five years had gone by since Columbus returned from America with the first announcement of his discovery ; and three or four years had elapsed since syphilis was notorious in Europe, viz., in 1498. It seems that Dr. Lopez de Villalobos was born in 1473, and should certainly be a good authority on that account. The year in which syphilis was declared to be epidemic is stated to have been 1494. Villalobos could then surely judge whether it was a new disease or not, as it is said that one-twentieth of the people of Spain were eventually attacked by it, and he was made physician to King Ferdinand, showing that he was probably an able man. M. Ricord says, with much truth and wit, that the origin of syphilis is like that of the Fine Arts, a mystery : and this is corroborated by the writings of some moderns. Captain Dabry, in a work called "La Medecine chez les Chinois," asserts that primary and secondary symptoms were well described in Chinese works on medicine ages before the fifteenth century ; and the Sucrutas, a Hindoo work, written about the year 400 A.D., is mentioned as existing in Hindostan, which gives descriptions of ozæna, and other syphilitic symptoms, occurring after infection of the organs of generation

Readers of Celsus will remember how phagedænic chancre of the penis is described, and treated by that physician by means of the actual cautery; and Aretæus, in his work entitled "De Causis et Signis Acutorum Morborum," book III., chapter 8, says that in some persons the uvula is destroyed to the bones of the palate. And it is said that Marcellus Empiricus makes mention of "ulcera tibiarum qua intrinsecus serpunt," and which, it is contended, can only refer to syphilis, and to no other disease. Martial, in the seventh book of his Epigrams, speaks of a family as being *ficosa* in the following terms:—

> "Ficosa est uxor, ficosus est ipse maritus.
> Filia ficosa est, et genor atque nepos.
> Nec dispensator, nec villicus ulcere turpi,
> Nec rigidus fossor, sed non arator eget."

In addition to these quotations, we hear recently that Prescott and Irving in America have given it as their opinion that the Americans had received syphilis from, not given it to, the Spaniards under Columbus. So that, taking all things into account, must we not declare that the "origin of species" of syphilis is yet uncertain? Michel Scotus, in his "De Procreatione Hominis Physionomia," written in 1477, shows, it is said, very plainly, the connection existing between affections of the genitals and the lepra of that period (an opinion in which Dr. Webster of London coincides) in the following sentence: "Si vero mulier fluxum patiatur et vir eam cognoscat, facile sibi virga vitiatur, ut patet in adolescentulis, qui hoc ignorantes, vitiantur quandoque virgâ, quandoque leprâ." Are we to infer from this that syphilis has always existed? Truly, we are again in difficulties; for, in 1496, there comes a decree of the municipality of Paris against persons affected with what was evidently considered to be a new disease, called the "grosse verole," which had for two years prevailed in France. Dr. Lanceraux, on this latter account, seems not to believe in the view that syphilis was imported into Europe by the sailors of Columbus. And here we may leave this knotty point to some more fortunate historian of the Darwinian school, who may, perhaps, show how it was that syphilis all at once seemed to become epidemic and appalling all over Europe at the end of the fifteenth century. Fracastor, writing in 1546, gives a very good account of the way in which contagion was spread. He asserts that coitus was the chief agent in contagion, but admits that a considerable number of children became affected

by suckling diseased mothers or nurses. The disease showed itself, he says, in his work "De Morbis Contagiosis," sometimes one, two, three, or four months after contagion. Now that oceanic steam navigation has made the planet we inhabit comparatively well-known to us throughout, we are beginning to find traces of syphilis everywhere, and to understand that the names of "Yaws" and "Framboesia" in Africa, of "Sibbens" in Scotland," and, more recently, of "Radesyge" in Norway, all mean nothing more nor less than secondary and tertiary syphilis. Amboyna pimples, and the Pian of Nerac, which in 1780 appeared in St. Paul's Bay, Canada, are nothing more than this contagious disease, which committed great ravages among the savage Indian tribes. In their case, the disease seems to have been extensively spread by the lips, as we, indeed, frequently enough witness in London at present. In some other instances, as at Brunn, and at Nerac, the disease, when epidemic, has been transmitted by means of kitchen utensils, and linen, &c., much more than by coitus.

In Iceland, it is curious (if we are to believe the assertions of Dr. Hjaltelin) that this fell contagion has not been able to become established; and the same is reported with respect to the Faroe Islands; but, in Norway and Sweden, the disease is virulent, probably owing to the inclemency of the climate; and its treatment is eagerly debated by some of our most learned brethren in Christiania almost every year. In this country the disease is widely spread, especially in our army, which is composed of a number of grown-up men who are not allowed to contract any domestic ties. The consequence of this is that, in the home army in 1860, for instance, the amount of contagious diseases, including, of course, much true syphilis, was such as to account for the loss of 8·69 days of service per head; whilst, in France, during the same year, there was a loss of only 3·90 days per man from venereal diseases. Doubtless, this is owing in great measure to the fact, that concubinage is very prevalent in France among all the humbler classes, and not to the Contagious Diseases Acts of that country in any great degree, since there is but little venereal disease among our troops in the West Indies, owing to the fact that the native women there live maritally with the troops. Syphilis and like contagions are very prevalent in India, China, and Japan, and commit great inroads on the health of our celibate troops in these countries. New Zealand was free from the disease until Captain Cook's sailors imported it into the island, and in Tahiti this contagion at first caused immense damage to the

native population, although it is now much milder in that charming island. Dr. Livingstone contends that both syphilis and phthisis are unknown in Central Africa. Of course, wherever commerce has penetrated the disease is to be found. This is one reason why commerce is by no means an unmixed benefit to the human race. It appears that, in the Gulf of Guinea, syphilis is one of the most fatal diseases which males are subject to. Lancereaux thinks that it was reserved for the great epidemic of the fifteenth century to show, on a grand scale, the connection between the primary lesion and the secondary symptoms. He contends that the circumstances which in certain places appear to aggravate syphilis, such as want of acclimatisation, hard work, excesses, over-crowding, and, *perhaps* also, contamination from one race to another, are precisely those under which the epidemic of 1495 developed itself. "Thus everything leads us to believe that the epidemic disease of that period did not differ, either as to its cause or its nature, from certain cases of syphilis in our own day, occurring, for the most part, under special conditions." The author holds that syphilis, like variola, is probably milder now-a-days, because our ancestors have suffered from it to such an extent.

WHAT IS SYPHILIS?

It is not so difficult, perhaps, to answer the question, What is syphilis? as its converse, What is not syphilis? Has soft chancre any relationship to the disease? Is gonorrhœa quite another affair altogether? These are questions which to some appear easily enough answered: but these persons are generally found among those who have read more than they have seen patients, or interrogated nature. In 1542, Vigo divided the French disease into two periods, under the headings "morbus non confirmatus," and "morbus confirmatus." Thierry de Héry divided the drama of syphilis into three acts: the ulcer, the eruption, and the period of exostosis and caries of the bones; and Ricord, in 1856, in his "Lettres sur la Syphilis," has a somewhat similar nomenclature. Bazin, the distinguished French writer on skin diseases, adds a fourth act to the drama: the quaternary period, when the internal organs are affected. Virchow speaks of two periods in syphilitic symptoms: the period of marasmus and cachexia, with degeneration of the viscera, and the period of inflammation and neoplasms. The author is inclined to leave out these stages, and merely treat of the disease as one long act,

co-extensive in some cases, if not in most (as proved by the rarity of fresh attacks), with the life-time of the patient. There can be now no doubt that syphilis resembles small-pox, measles, and scarlet fever, in so many respects as to make it perfectly allowable for us to classify the disease among virulent, special, or "zymotic" diseases. No harm can now be done by such a classification; and, if we mistake not, much light will be thrown on the various facts in the evolution of the disease by considering it as a poison which has sequelæ, just like measles, scarlatina, or glanders. First of all there is a variability in the time of incubation in all virulent diseases. In scarlatina, the period is from a few days up to three weeks, and even more. Typhus fever is said to incubate from three days up to forty days; and hydrophobia has an incubation period of from a few days up to several months. According to Dr. Marsh, in the Dublin Hospital Reports of 1827, inoculated variola had an incubation of from four to eighteen days; and, even in vaccination, cases are mentioned where the pustule has only commenced to show itself the seventh, nay, as late as the twentieth day. In 1863 the author of this paper published, in the "Medical Times and Gazette," the case of a gentleman who wounded his finger whilst sewing up the abdomen of a woman who had perished from tubercular peritonitis. *Thirty* days after this, abscesses appeared in the palm, and he was in a most critical condition for some time.

INCUBATION OF SYPHILIS.

Clinical facts are not of much use in the decision of this obscure point in syphilis; but in several cases, where the author of this work has seen contamination effected by means of the lips in kissing, there has been a well marked lull between the hour of inoculation and the appearance of the indurated sore on the lip. In one case, where a young woman could mention the very evening when her intended husband had bitten her lip, there was nothing seen for at least fourteen days after the occurrence; and then an extremely hard sore gradually arose, with hard submental and submaxillary glands, followed by multiple eruptions and exostoses. Another lady remembered that it was nearly a month after her intended husband kissed her before starting on a journey, that she observed a sore, which was afterwards recognised to be syphilitic, and the scar of which remains to this

day. But these cases are truly exceptional, and in the vast majority of instances we are left in the most profound doubt, in our clinical examination of patients affected with indurated sores, as to when and where they contracted the contagion. The author is convinced that by far the greatest number of cases of syphilitic infection in males are derived from the discharges of mucous tubercles in the female, not from chancres at all; and, therefore, he is perfectly able to believe, what experience shows, namely, that the incubation of syphilis frequently extends to more than three or four weeks, nay, even to several months. For instance, Dr. Galligo of Florence inoculated himself from labial mucous plates, and sixteen days passed without anything being seen; on the seventeenth day two pustules appeared, gradually taking on the appearance of indurated sores. And in the ten inoculations made by the anonymous writer of the Palatinate, with the blood of syphilitic patients, and with the secretion from secondary symptoms, the duration of the incubation period varied between fifteen and forty-two days. A great writer (the late lamented Dr. Auzias Turenne) inoculated, in two cases, on healthy persons, the pus of secondary symptoms, and the time which elapsed before any local symptoms appeared was eighteen and twenty-five days respectively. On the 17th July, 1850, Dr. Waller of Prague inoculated, by scarifications, the blood of a syphilitic woman on a healthy boy, aged fifteen. There was no inflammation, and the wounds closed in a few days. On the 31st August, that is forty-five days after inoculation, two distinct tubercles were noticed, the size of a pea, of a pale red tinge. These tubercles became hard and ulcerated, and were followed by secondary eruptions.

In this epoch of syphilis it is clear that individual constitution plays a great part in modifying the progress of the virus. Just as in scarlatina, in measles, and in other virulent diseases, the time of incubation seems to vary much with the constitution of the individual. M. Diday of Lyons has asserted that the incubation which takes place after inoculation with pus from a chancre, is much shorter than that arising after the secretion of secondary symptoms has been inoculated; but M. Rollet has invalidated this assertion by his observations made in the "Gazette Medicale de Lyons, 1859 and 1856." It seems, indeed, that in many cases, such as one published by M. Cullerier, in M. Langlebert's "Traité des Maladies Veneriennes, 1864," the incubation after inoculation from a chancre may be as long as thirty-nine days.

Whatever relationship exists between syphilis and the soft or so-called simple chancre, in the immense majority of cases, when this latter is inoculated, there is no incubation period. In about four out of five cases remarked clinically by Dr. A. Fournier, the simple chancre came within eight days after the infecting contact: but in the case of more than one hundred inoculations made by M. Ricord, from such simple chancres, the effect was seen in two days in the form of a small pustule. The author has been able to verify this fact also during the time spent by him in observing the experiments on syphilisation made in London by Dr. William Bœck of Christiania. Rarely, indeed, has any one observed, in the case of simple chancre when inoculated, a complete absence of local symptoms for any length of time.

John Hunter, in his work on "The Chancre," relates the history of an officer who, after two months had elapsed since contact with a dangerous woman, had an indurated sore. But some authors are quite opposed to the incubation of the syphilitic chancre. In a work entitled "Nouvelle Traité des Maladies Vénériennes, Paris, 1861," Dr. Melchior Robert says that when we insert on a healthy person the virus of an infecting chancre, the inoculation follows the same course as it does when pus from a soft chancre is implanted. "In no case," he says, "have I noted the phenomenon of incubation spoken of by authors; but always a papule the very first or second day, with a pustule the third, fourth, or consecutive days, and then ulceration; all this has taken place just as in the simple chancre, and when, in order to compare, I have inoculated in the same individual the pus of simple chancre and of infecting chancre, I noticed no appreciable difference in the commencement of the two accidents." Is this not an error in observation of M. Robert's? The author is fain to think so, although he has no desire to experiment, as this deceased gentleman did, with the pus of hard sores on healthy persons. On the whole, one is disposed to say that as far as the evidence before us will carry us, doctors of this time have a right to assume that, whatever the simple chancre may be (and the author does believe that it has a near relationship to syphilis) that sore has, in the immense majority of cases, when inoculated on a healthy person, little or no true incubation; whereas in the case of the hard sore or initial lesion of syphilis, there is always some incubation, at least more than a day or two in duration, sometimes weeks long, and even in some cases months.

This division between the incubation period of the two chancres

has given rise to what is called the "dualistic" school of writers on syphilis. Votaries of this school assert roundly that gonorrhœa and simple chancre have nothing whatever to do with syphilis. The author is, although a convert, by no means so certain of the latter assertion as he could wish to be. In the course of clinical hospital experiences, too, cases of tertiary lesions of the bones and throat have come before him, where male patients could give no history of hard sore, or indeed, in some cases, of anything but gonorrhœa (hidden hard sore?); so that he considers the dualists can hardly be said to have proved more (and that is most valuable) than that "soft chancres" alone are not followed by sequelæ, and that gonorrhœa is invariably, in the *male* sex, merely local in its conquences, and, when inoculated, producing no lesion. In the female sex, Mr. John Morgan's, of Dublin, late experiments detailed in the "Medical Press and Circular of 1870," have appeared to show that gonorrhœa, in a woman who is also syphilitic, may produce, when inoculated on any syphilitic person, a soft chancre. Professor William Bœck has long contended that the poison of syphilis may produce either a soft chancre or a hard one, according to the degree of acuteness of the inflammation caused by the inoculation; and, also, according to the soil, syphilitic or not, in which the virus is planted. His experiments, made by means of the pus from hard sores irritated by savine ointment, at the London Lock Hospital, were witnessed by the author in company with many others. Bœck says that he found over and over again that pus from indurated sores, when inoculated on persons with syphilis, often caused the appearance of soft chancres, which would go on for a series of generations, if re-inoculated on the patient. Mr. Morgan's experiments, if true, are a confirmation of Dr. Bœck's reiterated assertions. Mr. B. Hill thinks Bœck's experiments worthless, because the same lancet was used for all kinds of inoculations. Now it is possible that a syphilitic person, on whom a soft chancre has been inoculated, either by the lancet or by the ordinary method, might sometimes infect a person with syphilis, by means of the pus of the soft chancre he might contract. Thus it appears to the author, that a syphilitic person in such a condition might communicate both a soft chancre and also a true chancre ("mixed sore") followed by syphilis. Hence the doctrines of the dualists require a modification, which they will doubtless receive in a few years at the hands of some gentleman of the powers of Mr. Henry Lee, Mr. B. Hill, or Dr. Alfred Fournier. Mr. James Lane and Mr. Gascoyen in

London object to dualistic doctrines. At the present momont, wo are perhaps entitled to say that the initial lesion of syphilis is never *solely* "soft chancre," or gonorrhœa; but that *in the immense majority of cases* it is a sore which has appeared with some interval of timo after infection.

A most interesting and instructive debate on this subject is, at the moment these lines are being written, going on in Dublin in the far-famed Surgical Society of Ireland, and Mr. Bumstead of New York seems to bo leaving the dualistic school. As a general rule, it is very easy in the *male* sex to distinguish a soft chancre from a hard one, *i.e.* from tho initial lesion of syphilis. All who are familiar with the out-patient department of male Lock Hospitals, are aware that it is only occasionally that there is much doubt as to whether a sore on the male organ is syphilitic or not. (Dr. R. McDonnoll demurs to this.) In 1514, Vigo wroto in his work called "Aphrodisiacus," page 450:—"Nam ejus origo semper fere fuit cum pustulis parvis interdum lividi coloris, aliquando nigri, nonnunquam subalbi cum callositate eas ciramdante;" and Fallopius in 1555, says, "Quoties videtis sanatam cariem et quod remanent calli circa cicatricem, tenete esse confirmatum Gallicum." Ricord stated that gonorrhœa was not followed by secondary symptoms, but held that chancres infected or not, according to the idiosyncracy of the patients. Bassereau of Paris asserted that the indurated chancre or syphilitic lesion transmits only a chancre of the same kind. "The seed, not the ground, is the cause of the appearance of simple or hard sores." As a general rule, when syphilis is inoculated on a healthy person, the first thing that appears is a papule, projecting a little from the surface of the skin or mucous membrane, and which continues dry, becomes eroded, or ulcerates extensively. In cases where it continues dry, a small patch appears of a dark or brownish-red colour, sometimes covered by whitish scales. In the case where erosion exists, there is at first usually a copper-red spot, which desquamates, and is slightly ulcerated on its surface. This ulceration discharges but a small quantity of serous fluid, and has a diffused parchment-like base. It rarely lasts more than two months. The form most rarely seen, but the best marked of all, is the indurated chancre. It is said that first of all, in cases of this form, there is an induration which speedily passes into an ulcer. In some inoculations, the papule at first formed became covered with greyish scales, which ended in forming a crust, under which a cup-shaped ulcer was found. The hard chancro pro-

sents raised and rounded edges, a glossy iridescent and ecchymosed surface, and greyish floor. Ecchymosis, as Dr. Mauriac, of the Hôpital du Midi, has often pointed out to the author, is very frequently seen in the floor of this ulcer. It is surrounded by a hard envelope, which gives a sensation of induration to the touch. In about six weeks cicatrisation takes place. The scar which remains is but slightly depressed, as is common in syphilis of the skin. Induration sometimes persists for the patient's life. Of four hundred and seventy-one infecting chancres remarked by A. Fournier in the male, only twenty-six were extra-genital, and nearly half of these were on the lips. There were three on the tongue, and six at the anus. Syphilitic chancres on women are rare in the vagina, but not quite so rare on the os uteri. The author has usually seen them on the external surface of the larger labia, or at the clitoris. Gangrene and phagedæna are rare indeed in the history of syphilitic sores, although both of these have been seen several times by the author. When such ulcers become phagedænic, ecchymosis is commonly observed on the surface, and the ulcer spreads superficially. When mercury was more used than it is now, phagedæna in such chancres was far more frequently witnessed than it is at present. Thanks to the labours of Hermann of Vienna, H. Bennett, and others, the false induction as to the utility of mercury internally in hard chancres, or, indeed, in any disease, is fast becoming disbelieved in by many. As to the fact that gonorrhœa is totally alien to syphilis, we have already stated that this holds true in males, and, even in these, the sore may be in the urethra. For instance, a man recently in the Metropolitan Free Hospital, suffering from multiple exostosis of the tibiæ and bones of the forearms, had no recollection of any kind of lesion intervening since the time when, about thirty years before, he had suffered from gonorrhœa, and there were no scars. This is but one of similar histories collected and noted by the author, and was probably a case of chancre in the urethra. With respect to soft chancre, so persuaded are some authors that it is not even a poor relation of syphilis, that they call this lesion pseudo-syphilis. In 1838, Ricord distinguished soft from hard chancre, and said that it was curious that soft chancres were not seen on the head. This latter fact has since been explained by the fact that soft chancres run through their course very rapidly when inoculated on the head. Dr. William Bœck and others have tried the experiment of inoculating at the mastoid process of the temporal bone, and found this to be the case. Fortunately, "soft chancres," which are so rarely followed by syphilis, are much more common

than the other kind of sore. Puche found them to happen as four to one. The ulcer in soft chancre implicates the skin in its whole thickness. The edges of the ulcer are clearly punched out, as if with a punch; and we usually find two or more such sores on the same individual. Cicatrisation takes place commonly before a month or six weeks have elapsed. A white cicatrix remains without any induration. There is often considerable pain felt by patients suffering from this variety of sore, and the author must assert his firm conviction that this will always be one barrier, among many others, toward the adoption of the practice of syphilisation for the cure of syphilis, as recommended by Dr. William Bœck, in which hundreds of such pustules are sometimes artificially produced on the trunk and upper extremities. Besides which, iodide of potassium in large doses is generally much more efficacious. The phagedæna, which not so very unfrequently accompanies this form of chancre, is often very formidable, and has occasionally been known to destroy life, remaining unchecked even by actual cautery and the strongest caustics known in medicine. Bœck, Hjort, and Bidenkap of Christiania, and Köbner of Erlangen, writing in 1864, all assert that this form of chancre is producible on syphilitic patients by irritating the surface of the syphilitic sore, and the author believes that they have proved their point; although Mr. Henry Lee, Mr. B. Hill, and others, are opponents to this view of the question, alleging that the lesion thus produced is not true soft chancre, but merely inflammatory pus, which, in certain cases, is inoculable, although not syphilitic in character (Gaz. des Hop., 1869). Bœck's and Bidenkap's experiments are so well detailed in the work entitled "Recherches sur la Syphilis," that they have convinced the author of the connection between syphilis and soft chancre being by no means so remote as the ultra-dualists would have it.

Thiery de Héry says with regard to buboes, that the most certain sign of syphilis is when, after or during the existence of ulcer of the genitals, we find tumours in the groins, which do not suppurate. Three kinds of swellings of glands in the groin are observed: the simple or sympathetic, the virulent, and the indurated. In the case of sympathetic buboes, there is not much to be said, seeing that this form differs little from the glandular swellings remarked in ordinary irritations; but in about one quarter of the cases of soft chancre, virulent monoglandular buboes are perceived, which almost always suppurate, and which furnish inoculable pus. Phagedæna not unfrequently occurs in these forms of

buboes, and the ravages committed by it may be most extensive and often very difficult to arrest. Mr. Hutchinson uses hot baths. Notwithstanding all that has been written by the French authors, and by their followers in this country and abroad, there can be little doubt that cases do occur, in which it is very difficult to give a certain prognosis as to whether syphilis will follow after an ulcer or not. We may say, in general, that, when a slight superficial ulcer with a serous discharge has persisted for a long time, and when there is multiple glandular enlargement, syphilis probably exists. If the swelling of the glands is wanting we may hope that no syphilis is present. The author of this work has been by no means able to verify the assertion made by M. Bassereau, that slight chancres are likely to be followed by benignant syphilis. In many cases of extremely indurated sores, he has seen the disease very mild in its course; whilst, on the contrary, benignant sores have been not unfrequently the prelude to life-long attacks of gravity. Phagedænic chancre, however, is undoubtedly often the prelude of severe subsequent lesions, such as rupia. The so-called *secondary* group of symptoms comprehend some eruptions on the skin and mucous membranes, with iritis, falling of the hair, and deep-seated affections of the eye and periosteum. Some six weeks or two months after the syphilitic sore appears, we see some of the forms of eruption on the body, few or almost none of which leave any scars. First of all, in many persons poisoned with syphilis, we see a great amount of chlorosis, and observe a feverish reaction, accompanied by pains in the head, and by rheumatic pains in different parts of the body. This is in many cases accompanied by falling of the hair. The *café au lait* colour is often observable on the face as one of the earliest symptoms of syphilis. The temperature of the body falls notably in many cases of syphilis, and this takes place especially in women. This was first pointed out to the author by Dr. Alfred Fournier, some two years ago, in the case of some patients in the Lourcine Hospital of Paris, and since that date he has frequently verified the fact himself in London.

The forms of skin eruption which are seen in the so-called secondary period of syphilis are very various in their characters, and the period of secondary accidents may last for years. For instance, the author knows of a case where a man had an eruption on his scrotum six years after an indurated sore on his penis; and, having married, he communicated the disease to his wife (although not pregnant), who became affected with roseola and other well-

marked syphilitic symptoms. Roseola or erythematous syphilis is at first one of the most common forms of skin eruption seen. It consists of spots of dark rose colour, disappearing on pressure, and scarcely raised above the surface. This eruption is seen on the trunk and inner aspect of the forearms for the most part, and some say that palmar psoriasis is only a variety of roseola. This eruption may relapse for several months. It is distinguished from measles by the want of fever, but is not always so easily distinguished from the mottling of the skin produced by cold. The papular form of syphilitic eruption is also very commonly met with. The papules present a reddish hue, resembling the rose spots of typhoid fever, and are frequently seen on the forehead in the eruption called corona veneris. This form tends to remain long without disappearing, and in some cases it is very difficult to distinguish it from simple lichen, even although lichen *is* itchy. The pustular form of syphilitic eruption is frequent on the scalp, with alopecia of the scalp, and is also seen on the face and the trunk. Bazin describes three varieties of it—lenticulo-pustular, miliary or impetiginous, and ecthymatous, the last of which leaves scars. The pustular variety is characterised by large pustules, surrounded by a red circle and leaving a white cicatrix, after brownish or blackish crusts. In some cases of pustular syphilis, we may easily be in doubt as to whether we are in the presence of *grosse verole* or small-pox, especially where, as at present, (April, 1871,) we are passing through an epidemic of variola. *Vesicular* eruptions are rarely seen in syphilis. In one or two cases of it which the author has seen, the diagnosis has been difficult indeed. *Squamous* affections, or syphilitic psoriasis, are common enough, and are not unfrequently mistaken, as the author has witnessed more than once, for lepra vulgaris, or *vice versâ*, by London practitioners. The admirable writer on diseases of the skin, M. Hardy of Paris, observes that syphilitic psoriasis is found in the form of drops of copper colour, covered with fine white scales, on the trunk or upper extremities; also in the circinated form, commonly on the face, or on the palms of the hands, or soles of the feet; in which latter case it is made up of rounded spots of copper colour, covered with hard scales, which sometimes form cracks and fissures complained of by the patients. To distinguish this from ordinary psoriasis is sometimes no easy task; but the itching of the latter, and its seat on the elbows and knees, may often aid us in coming to a just conclusion. The pigmentary syphilitic eruption is one which often

deceives the novice in clinical syphilis. It often comes on, when roseola is disappearing, in the form of rounded, non-prominent spots, with a coffee and milk colour, sometimes covering the whole of the front of the leg or other regions, and being easily mistaken by the unwary for the parasitic affection called chloasma.

Alopecia, according to Fracastor, writing in 1546, was often considered to be caused by the remedies, such as mercury, used for the disease; but it was soon seen that this was one of the natural consequences of the disease, in perhaps five-sixths of the cases of syphilis that come before us. Women suffer more frequently from loss of hair in syphilis than men do. The hair becomes very dry, and, as shown by Mr. Erasmus Wilson, there is a change in its whole structure observable. This alopecia may last for several months, but when the strength returns, the hair becomes generally as strong as before, in this showing the resemblance between syphilis and several of the acute exanthematic fevers. The author considers that alopecia in syphilis is caused by the want of nutrition, which is the effect of the disease, not by the existence of any particular eruption on the scalp, as some would have it. It is remarkable how total sometimes the loss of the hair is, especially in women. In one case observed by the author, the eyebrows came off, along with almost complete baldness of the scalp and fall of the hair from the axillæ and pubes. In the course of two years, however, the lady regained her hair in as great luxuriance as before. The *matrix of the nail* is sometimes attacked by mucous tubercles and syphilitic eruption.

The mucous membranes are, in most cases of syphilis, sure to be attacked by what some persons call generally *mucous tubercles*—a name which has been strongly objected to recently by Fournier and some French writers as unscientific. In the throat we find, in cases of syphilis in its early stages, a uniform redness on the velum palati, tonsils, and pillars of the fauces; often, too, on the posterior wall of the pharynx and the interior of the larynx, but not proceeding lower than this level in the gullet at any rate. The mucous membrane of the nostrils sometimes also, but rarely, is reddened as if there were ordinary coryza. This erythema has been often seen by the laryngoscope in the larynx, in company with whitish raised patches. In such cases the voice is hoarse, but the affection is not of long duration and is easily cured. The author does not remember to have made the diagnosis of any case of syphilitic bronchitis in the eruptive period of syphilis, as has been done by Stokes and Graves.

of Dublin. But bronchitis is so common an affection, that it is difficult to decide that it is specific, even where the patient is affected with syphilitic roseola, which assertion the author hopes will not be taken to indicate his disbelief in the existence of syphilitic phthisis. On the contrary, he has had frequent opportunity to convince himself of the reality of such an occurrence. Small ulcerations are commonly met with on the surface of the tongue, on the fauces, on the nostrils and sides of the lips, and on the internal aspect of the lips. They are very superficial, but return again and again for years with annoying persistence. There are also certain appearances which are only seen in syphilis. These are characterised by elevated patches of the skin or mucous membrane, circumscribed and more or less whitish in colour, or rose-white. These are developed sometimes on healthy surfaces, or are said to take the place of chancres in the female sex. On the skin, these *patches* are covered with a transparent crust, and surrounded by a swelling. On the mucous membrane the patches are little prominent. The vulva, the anus, the upper part of the thighs, the tonsils, mouth, lips, and spaces between the fingers and toes, the nipples, groins, and ears are most frequently affected. On the scrotum the merest patches are often met with. In the mouth they are at first of a violet hue, and then fissures of the tongue often ensue. They are whitish on the velum palati, and are found on the true and false vocal cords in perhaps one in eight cases of hoarseness occurring at this period of syphilis. Such appearances are seen at the edges of the nostrils and mouth for years. The author cannot share the optimism of Bassereau, who considers such appearances as evidence that syphilis is likely not to be grave in after years. Some of the worst cases of tertiary syphilis he has seen have occurred when patches of this kind have been common. As to vegetations, or warts, these are no proof of the existence of syphilis, as they occur in persons who have never suffered either from gonorrhœa or syphilis. All such ulcers and patches, on whatever part of the body they are situated, are full of contagious secretions, and as they relapse for many years, it is difficult to say when a person affected with syphilis leaves off being a focus of contagion. In syphilitic women with leucorrhœa the contagion may seemingly last a quite indefinite period. Probably, however, in the course of some six or seven years contagion rarely exists, or, indeed, in most cases is over in three years.

The glands which swell at this period of syphilis are the inguinal, posterior cervical, the mastoid, submaxillary, axillary, and popliteal.

There is usually, although not always, some local lesion in the vicinity, which accounts for this swelling. In children, and even in adults, these swellings remain permanent for years. Does jaundice ever arise from syphilis? The author believes that it occasionally does. In children the joints are sometimes much swollen in this period of the disease, and although this is rarer in adults, cases of the kind do occur. The superficial bones, such as the tibia and the ulna, not unfrequently suffer from periostitis, which causes great pain, especially at night-time, and the testicles are apt to become inflamed, just as they are in gonorrhœa, in some rare cases, at this period. The author has seen in several cases hemiplegic seizures arise in the midst of the eruptive period of syphilis. A well-marked case of this kind came under his notice in 1869 at the Metropolitan Free Hospital. A man, suffering from corona veneris and papular eruption over the trunk and upper extremities, was brought into the hospital speechless and with hemiplegia of the right side. He has continued hemiplegic and nearly aphasic up to the present time, 1870. In the post-mortem observation on a similar case, related by Dr. Kuh, infiltration of the convexity of the brain with yellow exudation was found, and a similar diagnosis was made in this case.

Syphilitic iritis is one of the most frequent forms of syphilitic affection observed in the eruptive period of the disease. In a prolonged attendance on the Royal Moorfields Ophthalmic Hospital, the author has had ample opportunity to study this disease. Some writers say that there are two varieties of syphilitic iritis—superficial and deep-seated. When syphilitic iritis is of its ordinary type, the eye is red from congestion, the iris dull, then of a dusky hue, with occasionally small elevations on its surface. The pupil is uneven, and more or less altered in form—triangular, or shaped like a shamrock; the iris sometimes assumes a yellowish rusty hue. In some cases there is adhesion of the posterior part of the iris to the lens. Such iritis is apt to recur year after year, and often, in this way, to cause irremediable damage to vision. The pain is slight at first; afterwards, it is severe around the orbit. Intolerance of light is uncommon. It is rare that both eyes are attacked at once, but not rare to see one affected after the other. It lasts a long time; and although, when carefully treated by iodides and locally by atropine, (gr. iv. ad ℥j.,) the result is often good, it must be said that the prognosis of syphilitic iritis is far from being usually a good one. This form of iritis has not uncommonly

been met with by the author in syphilitic children, and has been recognised by the irregularity of the pupil and the presence of dimness of the cornea and of tubercles on the iris. In not a few cases the inflammation of syphilitic iritis extends to the choroid and retina, and causes destruction of the eye. Besides which, syphilitic *corneitis* is sometimes seen to follow or precede this affection, and this complication of syphilitic iritis frequently causes permanent imperfection of vision. Since the use of the ophthalmoscope has become generalised, the existence of choroiditis of syphilitic origin has been ascertained. The patient complains of muscæ and dimness of vision, and the ophthalmoscope reveals long sinuous veins, with hazy vitreous, showing the optic nerve as if in a fog. There are patches of exudation seen on the choroid. The prognosis, if iodide of potassium is used, is not very bad. In syphilitic *retinitis* the optic nerve has an ill-defined outline, and is surrounded by a dirty-greenish zone. There is photophobia. By means of the ophthalmoscope the vessels of the retina are found injected, and the veins are much dilated in some cases, and obliterated in others. Another form of affection, somewhat rare, in the syphilitic eruptive period is mydriasis. The author has only observed some three or four examples of this. Mr. De Méric has published a small pamphlet on the subject, and it is well that all physicians should be aware that syphilis is sometimes a cause of this affection, as it is by no means incurable in such cases, if Calabar bean be used and iodide of potassium freely administered.

Lancereaux and some others place rupia among the affections peculiar to the period of gummy products. The author is of opinion that rupia should rather be placed among the eruptions of the early period of syphilis. In several cases he has seen rupia of a formidable character (and in one private case, seen in company with Mr. Robert W. Dunn, a few years ago, acute rupia proved fatal) occur within a year of infection. Impetigo, ecthyma, and rupia are the three forms of the rupial division of syphilitic eruptions, and form what is called *malignant syphilis*. In all of the three a red spot is first seen, on which pustules arise. These burst, and a greenish crust forms over an irregular ulcer, with small-sized granulations, and surrounded by a red circle. Rupia is *most* frequent on the lower extremities, but may extend over the whole body. There is usually a profound state of cachexia in such cases, and the author has remarked that several cases of visceral syphilis which have proved fatal have been preceded by eruptions of rupia. Fortunately,

malignant syphilis is comparatively rare at the present day. We occasionally witness in the eruptive period small tumours of a dusky red colour, which occupy the whole thickness of the skin, and which soften and give rise to phagedænic ulcers. In addition to these, we have the tuberculo-ulcerative cases, which are seen chiefly on the face, especially on the nose and lips, and which are charactorised by hard, bright red pimples of coppery colour, and which are serpiginous. When these heal, they leave ugly and indelible scars. The most formidable of all these affections is the tuberculo-ulcerative affection, described first by Rayer, which is said by him to commence with a crop of red, hard, smooth, indolent tubercles, which soften after a time and ulcerate, the ulcer being covered by a thick uneven crust, blackish-green in colour. The ulcer tends to extend in surface rather than in depth, and leaves dead white scars, with bridles and depressions. In some cases the ulcer extends deeply, and destroys the nose and adjacent parts very rapidly. There is some difficulty in distinguishing cases like the latter from epithelioma or struma, but the scars of struma are rosy blue, and in cancer the ulceration has round granulations and whitish edges, and the floor of cancerous ulcers is often sanious, and never covered with crusts. The author has over and over again seen such cases taken for struma by persons of experience, but become rapidly cured when large doses of iodide of potassium were administered to clear up the diagnosis—*i.e.*, a scruple thrice a day. With regard to *onyxis*, this affection of the toe-nail is found both in the eruptive period and later on in syphilis. It is also found in the nails of the fingers. An ulcer commences at some part of the lunula or root of the nail, and the toe becomes swollen and of a deep brick red. The nail often falls, and, when the case is neglected, the phalanx may be found to have become carious or necrosed, and to require removal. If constitutional treatment be adopted, however, the result is indeed uncommon. Iodide of potassium, not mercury, should be used in such cases freely. It is impossible to say when the period of *gummy tumours* arises in syphilitic infection. The author has witnessed enlargements of the testes within a year after the virus was absorbed, and has also seen fresh nodes occur at least twenty years after the onset of the disease. To make distinct periods in syphilis, therefore, is apt to confuse the student. It is better to be always prepared for almost any symptom in a person who has absorbed the poison, and, above all, not be too certain in our prognosis. As is now well known, in many persons

the whole of the disease consists in a few eruptions, and then all is over. The patient's health seems quite as good after as before the the insertion of the virus. A certain per-centage of cases of syphilis (shall we say, about seven?) are destined, however, to be severe and life-long in duration, and in them we have to look for the constantly recurring phenomena of gummy tumours. The name of "gumma," or gummy tumour, is as yet hardly known in the English literature of the disease. It seems to be due to Gabriel Fallopius, who, in 1564, says that, "after the pains, or simultaneously, tumours arise near the joints, in the middle of the fibula, or the ulnæ, or on the head. These tumours, when they contain a thick material, like mucilage, are called on this account *gummata* by physicians." Virchow, in his treatise on Constitutional Syphilis, gives a clear account of the nature of these tumours. They arise in the subcutaneous cellular tissue, are from the size of a pea to that of an egg, greyish or yellowish in tint, and sometimes soft or glue-like, but more generally firm in texture. Looked at under a good microscope, these tumours are often seen to be collections of small rounded corpuscles, with some elongated cells. Like tubercles, these tumours rapidly break down, and are painless. The skin becomes implicated and perforated, and an ulcer is left, which on healing leaves the superficial or deep scar of syphilitic appearance. The upper and lower extremities are most frequently attacked, then the head, and the chest and clavicles are sometimes invaded. Constant errors in diagnosis are made by inexperienced persons in such cases, since these gummata much resemble boils in some cases, or strumous ulcers, &c. It is important to make the diagnosis early, as the iodide of potassium is almost a certain cure in most of such cases, and, if not given, the damage caused may be frightful and irreparable.

Such tumours may occur in the glands, and occasionally, though rarely, occupy the mammary gland, giving rise to the idea of cancer in the organ. In cases of obscure ulceration of the breast, the history should be well inquired into on this account, and iodide of potassium tried, if there is the slightest doubt, before proceeding to operate. The author was consulted in one case in which this caution proved most useful.

As to the diseases of bone occurring in syphilis, the most marked of all is that of *dry caries*, the worm-eaten bone of our museums, but it is comparatively rarely met with in this disease. Periostitis or osteo-periostitis is the most

common, and gummy tumour of bone is much less frequently met with. In periostitis, the inflammation usually commences in the periosteum, and sometimes in the substance of the bone, and the Haversian canals are found dilated. The bone becomes denser; then nodes form on the periosteum, which sometimes disappear, but often suppurate and the bone becomes carious. Such phenomena are often witnessed on the tibia, the fibula, the ulna, the clavicle, or any of the superficial bones, and especially on the cranium. Fortunately, since the days of iodide of potassium, such lesions are generally rapidly cured; before that time, however, when that dangerous drug, mercury, was used, bone disease was often quite incurable. The gummy tumours of bone are not nearly so frequent. They are, in rare cases, found in the substance of the bone, but more generally in the periosteum, and, when opened, a glue-like fluid exudes. In fortunately exceptional cases, they may occupy the diploe of the skull, and cause necrosis of the part. This occurred extensively in the case of a gentleman who consulted the author some years ago, and who had been in the habit of reading all that was published on syphilis, and swallowing, *propria motu,* a large quantity of quicksilver in a fluid state for years. In many cases of syphilis of old standing, on putting the finger on the cranium, various points are easily perceived where the bone has disappeared from the softening of one of these gummata.

Dr. Wilks, Dr. Jenner, and others have called particular attention to the occurrence of dry caries of the skull in syphilis. It is remarkable how few symptoms may be exhibited, even in cases where this kind of caries has caused the exterior table of the skull to present the appearance of a sieve. The author, in more than one instance, has seen this appearance in patients who during life had complained only of slight though very persistent, headache. Such dry caries seem also to attack the bones of the nostrils in some cases, although periostitis is almost always the cause of the concomitant ozæna. Whilst one part of the bone is wasting away from caries, the neighbouring part is, in many instances, made thicker by deposit in its interstices. The author has not seen any case of softening of the bones (mollities) from syphilis. The pain in syphilitic affections of the bones is frequently nocturnal, and causes sleeplessness in many cases. When in the bones of the head, it may result from a node on the internal aspect of the skull. There is often great giddiness and epileptiform seizures, with a feeling of tearing and horrible twisting of the parts complained of.

Loss of vision is sometimes caused by exostosis of the sphenoid bone. Dry caries of the skull is characterized in most cases by persistent headache, and by slight prominences which leave depressions.

Rheumatic exostoses are sometimes confounded with syphilitic, but are more irregular, multiple, and confined to the joints in most cases. Where treated with iodide of potassium and blisters, the syphilitic forms usually rapidly disappear, and end in resolution. Treated by mercury, they are often gravely and rapidly aggravated, according to the author's and other persons' experience.

The *cartilages* of the larynx are not unfrequently attacked by syphilis, and death is frequently the result of the narrowing of the air passage from the necrosis of some of the cartilages. In the case of an elderly woman recently under the care of the author, after death, which was postponed by tracheotomy, performed by Mr. Charles Smith of Brighton, complete destruction of the epiglottis was found to exist. In other cases, the aphonia is caused by the destruction of the vocal cords, and the necrosis of some of the cartilages, either of the trachea or larynx. The same thing has been observed by the author in cases of hereditary syphilis.

Syphilis very rarely attacks the joints, but the author has seen it do so in more than one case of hereditary syphilis in children. Gummy tumours also sometimes occur in the muscles, and destroy a portion of the muscular tissue, thus causing shortening and deformity of the limb. It is chiefly in the forearm that such deposits in the muscles take place, but they may occur in almost any of the muscles of the body. Lisfranc mentions the occurrence of a large tumour in the tendo Achillis, which got well by the administration of iodide of potassium.

Syphilitic disease of the testicles is frequently witnessed; and is often followed by absence of spermatic filaments in the semen. Sometimes there is interstitial deposit in the testes, which is characterized by tendinous looking bands, radiating from the tunica albuginea, and insinuating themselves between the seminiferous tubes, and thus compressing and separating them. The tubules become atrophied, and the testicle, hard at first, then degenerates and wastes. Almost all cases of chronic orchitis are syphilitic. Sometimes in cases of syphilic orchitis, we find tumours the size of a walnut, or egg, or small nut, deposited in the midst of the testes. They are almost dry on section, and contained in a whitish capsule. They are often composed entirely of cells and

nuclei. Such, and all forms of syphilitic testicle, are rapidly cured by large doses of iodide of potassium. Mercury is quite out of place in such affections. We often find great difficulty in the diagnosis of tumours of the testicle; and have to guide us chiefly the fact that tuberculosis commences in the epididymis in the great majority of cases. Tubercle rapidly softens and forms abscess; syphilis very rarely does this. Cancer is a product of much vascularity, and not so likely to be taken for syphilis. Unlike the case of gonorrhœal orchitis, there is rarely any pain at the onset of syphilitic sarcocele, nor is there much tenderness on pressure. We remark a pear-shaped tumour, either smooth on the surface, or with irregularities. There is but little hydrocele in general, and both testes usually become affected. In several cases examined by the author, there has remained a sterile condition as a result of this condition of the testes, and this in some cases but ten months after infection. It is very slow in passing through its stages, and, fortunately, if iodide of potassium be had recourse to in large doses at once, this untoward consequence may in most cases be avoided. Even when cured for a time, we must be on our guard, as syphilitic sarcocele is apt to relapse after a time.

The author is inclined to believe that the analogue of the testis, the ovary, is almost as frequently attacked by syphilis as the former. Of course, this assertion is not easily proved or disproved; but a sufficient number of post-mortem observations have been given to show that syphilitic ovaritis is by no means unfrequently the cause of sterility in prostitutes. Syphilitic disease of the neck of the uterus produces those never-ending discharges which are so common in women who have once been infected with syphilitic poison.

All physicians who have paid attention to the subject of syphilis of late years are well aware that albuminuria of a fatal character is by no means rarely the effect of the poison of syphilis. Rayer, in his justly celebrated work entitled "Traité des Maladies des Reins," remarked that syphilis was a common cause of disease of those organs. One observer, Dr. Engel, has calculated that about one in three cases of chronic Bright's disease is due to syphilis. This is probably an exaggeration; but the author has seen many cases in which the cause of the disease was but too clearly the syphilitic virus. The post-mortem appearance of the kidneys in syphilitic albuminuria is a smooth surface, with yellow points mottling the surface. Sometimes the surface presents knobs or

rugosities, as in ordinary chronic nephritis. The epithelium is in a fatty condition. Altogether, this is one of the forms of chronic interstitial nephritis, resembling to a certain extent the gin-drinker's kidney, &c. In some cases we find gummata in the cortical part in the form of small tumours, of the dimensions of a pea, and yellowish white, which the microscope shows to consist of cellular elements.

In some cases, cicatrices in the kidneys are found, indication of the former existence of such gummata. In the case of a man who died recently under the observation of the author, at the Metropolitan Free Hospital of London, there were rupial sores over the whole body, accompanied by cachexia, for which the patient was treated by mercury for some time at Guy's Hospital. When first seen by the author, there was œdema of the ankles, as also large quantities of albumen in the urine, which showed in the microscope fatty degeneration of the renal epithelium, and some casts of the tubes. After death, interstitial nephritis was found, and a tumour the size of a small nut in the cortical part of the right kidney. The course of syphilitic Bright's disease is slow, and most commonly fatal, although in one or two cases the author has found a cure take place from the use of iodide of potassium for a long period. For instance, in a case of enlargement of the liver in a syphilitic patient, there was albuminuria for a short time, which disappeared as the liver gradually became smaller under large doses of that invaluable specific. In another case, a woman, mother of a syphilitic child, had albuminuria and anasarca on two or three different occasions, in the course of some five or six years that she was under the author's observation; but at length appeared to become entirely free from albumen in the urine.

The most common, probably, of all the late symptoms of syphilis is deep ulceration of the mouth and pharynx. Such ulcers attack the tonsils and pharynx, and rapidly destroy them in many instances, especially in women, who are so careless about their health. The whole of the tissues become reduced to a mass of pulpy consistence, adhering to the floor of an unhealthy ulceration. The bones of the hard palate often become exposed by such ulceration and necrosed. The palate is commonly attacked, but the pharynx and larynx very frequently are involved in the mischief, which may be sometimes truly deplorable. The author has seen one case of paralysis of the upper extremity, caused by the extension of the inflammation to the envelopes of the spinal cord in the cervical

region. Iodide of potassium is such an admirable remedy in such cases, that such untoward terminations of syphilitic pharyngitis but comparatively rarely occur in London at present; although sloughing of the throat is extremely common among the out-patients of the different large and especially the free hospitals. Tumours are found in the tongue in many cases, near the base especially, like hazel nuts. If not treated, these soften, and, bursting, leave abscesses on the organ and cicatrices. They are not unfrequently mistaken for cancer when in the ulcerative stage, but the chronic progress of the syphilitic ulceration and the want of implication of the glands show the diagnosis. Gummy tumours often form in, and rapidly perforate the velum and the hard palate. They should be at once vigorously attacked by large doses of iodide of potassium, and cauterised with strong nitric acid, to save damage being done. The same treatment should be fearlessly applied to the ulcerations which often fill the pharynx with a mass of putrid detritus, preventing deglutition and destroying appetite. It is amazing how large the cicatrices in the pharynx sometimes are, and how the ulcerative process sometimes ceases spontaneously, never to return. Adhesions of the uvula to the posterior wall of the pharynx are not uncommon, and stricture of the œsophagus opposite the larynx has been met with by the author. Dr. West of Dublin has given some cases of syphilitic strictures of that canal, as also Dr. Morrell Mackenzie, in the Pathological Society of London Transactions for 1869. In one case mentioned by Dr. West, the stricture was two and a half inches in breadth at about four inches below the level of the epiglottis. A small sound, No. 4, could hardly be passed. The author has met with a similar case.

Virchow seems to refer some cases of thickening of the stomach to syphilis; and thickening of the stomach in the pyloric region has been referred to the same cause. M. Cullerier is an authority upon this point. Syphilitic ulceration of the large intestine is spoken of as sometimes causing persistent diarrhœa. In several cases of chronic diarrhœa, seen by the author, there has been a syphilitic history, and in more than one there has been affection of the rectum; but whether the diarrhœa was caused by specific ulceration of the colon remained uncertain, in the absence of post-mortem examination. In one case of blood in the fæces, alternating with diarrhœa, iodide of potassium did a great deal of good. There is an affection of the rectum, which is now well known to be syphi-

litic, and which causes stricture and great suffering. Usually about an inch above the anus, we find a hard ring, scarcely admitting the finger, and formed of thickened mucous membrane, with transformed subjacent cellular tissue. Below this stricture, the mucous membrane is turgid, and covered with pus, and above it is eroded. Women are most subject to syphilis of the rectum. This affection is accompanied by obstinate constipation, varied by diarrhœa, and causes wasting and emaciation Dilatation by bougies and the use of iodide of potassium are both required.

Peritonitis is seen in syphilitic children in many instances, and occasionally in adults, when the liver is the seat of inflammation of a specific character. Simpson and Bærensprung give cases to illustrate this fact. The affections of the *liver* due to syphilis have been explained by Ricord, Rayer, Wilks, Virchow, and Frerichs, and although some physicians seem still to doubt their connection with syphilis, the author thinks that they are well made out. In the liver we find the occurrence of interstitial hepatitis, of gummata, and of cicatrices. There can be no doubt that many cases of supposed alcoholic cirrhosis of the liver are due to syphilitic inflammation of the organ. In such cases, there is found after death a peculiar aspect of the organ. Instead of the granulations seen in alcoholic cirrhosis, we find a deeply furrowed condition of the liver, causing it to look like the "kidney of a young calf." This is due to the formation of new elements in the connective tissue of the organ and to the wasting of the liver cells. The edges of the liver are irregular, and the capsule is generally thickened. There are whitish patches seen in places, and on section bands of white fibrous tissue are seen extending across the organ and causing the appearance of puckering observed at the surface. A more common form of syphilitic disease of the liver, is that called gummy tumour of the liver. The liver in these cases is indurated and attains, sometimes, a very large size. In post-mortem examinations of such cases it has been found that the liver substance is covered with small round grains, distinct from one another. The liver is yellow, hard internally, and, on cutting it, small hard tumours are felt to resist the knife. In a case recently in the Metropolitan Free Hospital, under the care of the author, that of a young man aged twenty-one, a sailor, there was a very great enlargement of the liver, which extended two inches below the umbilicus, and was accompanied by iritis and disease of the maxil-

lary bone. The young man, after two months' treatment with iodide of potassium, left the hospital well enough to resume his business as a sailor, and with the liver much diminished in volume. There was no ascites in this case, nor any feeling of irregularity in the surface of the organ, which felt hard and was quite free from fluctuation.

In some cases, small tubercles, or nodosities, are found in the liver, of a yellowish white colour, dry, and surrounded by a yellowish, callous, or tendinous tissue. These tumours are generally deep-seated, and are sometimes as large as an egg, but are generally the size of a pea or smaller. Sometimes they are found to be softened and partially absorbed. For a long time such tumours were called cancer or tubercle of the liver; but the cancer tumours of the organ are very moist and vascular, the syphilitic not. Syphilitic cicatrices in the liver were noticed by Lancereaux in fourteen out of twenty-two examinations of visceral syphilis. The liver is liable to fatty degeneration in syphilis. Dr. Wilks and others have given cases to show that syphilis leads occasionally to waxy degeneration of the liver; and Graves and Budd attributed the waxy liver to a combination of syphilis and mercury. In some cases of syphilitic liver, a sensation of projection on the surface of the organ is experienced, similar to that felt in cancer. Ascites is found with the cirrhosed variety, and even with the gummy form of liver, but jaundice is rare. Diarrhœa is common, and is serous and sometimes blackish in colour. The urine is frequently albuminous, but, in some instances, the disease produces no symptom save marasmus, which is sometimes wonderfully benefited by large doses of iodide of potassium. The skin is discoloured, and the patient looks cachectic; these two symptoms, with the palpation of the organ, and a history of syphilis, may clear up the diagnosis in most cases. Tubercular peritonitis commences with pain in the abdomen, and with diarrhœa and vomiting; and alcoholic cirrhosis is met with in drunkards, there being the usual sour eructations to guide us. The specific disease is unfortunately but too often fatal, but much less so than other forms of hepatic disease.

The lymphatic glands are extensively affected in some old cases of syphilis. The volume of the thyroid gland is sometimes increased, and the supra-renal capsules have been found enlarged and degenerated in visceral syphilis. The spleen is sometimes affected just like the liver, also with gummata, in the form of rounded nodosities. The glands of the abdomen are most fre-

quently attacked in syphilis; they become indurated and enlarged. The spleen is sometimes felt to be enlarged, in children especially; and doubtless, syphilitic cachexia is due to a certain extent to the disease of this and other blood glands. In one case of bronzing of the skin seen by the author, there was a distinct syphilitic history. Of late several cases of syphilitic pericarditis and even of gummy nodules in the substance of the heart have been mentioned in the London Pathological Society. The diagnosis in such cases seems out of the question. The gummy tumour is found in the muscles of the heart, the valves being usually intact. Such tumours are usually rounded and of the size of a pea, or even larger. Dr. Balfour of Edinburgh, and others, have narrated cases which leave no doubt that aneurism of the aorta and great vessels is frequently caused by syphilis; and Morgagni says that he has frequently seen the aorta ulcerated and corroded in the bodies of those, especially, who have suffered from syphilis. The cerebral arteries have been found obliterated in cases of syphilis, so that this disease causes arteritis in some cases. Dr. Wilks has given cases of aneurism of the aorta which he ascribed to syphilis (Guy's Hospital Reports, 1863).

The syphilitic diseases of the larynx have been long known; but those of the lungs are only being studied after the long period of sluggishness left by the doctrines of Laennec and Louis. The tertiary syphilitic lesions of the larynx are of grave importance. Ulcerations of the epiglottis, tending to perforate it, are found; ulceration of the mucous membrane over the vocal cords is by no means rare, and is of fatal termination in many instances. When such ulcers heal, they may leave behind dangerous narrowing of the chink of the glottis. Gummy tumours develope in the mucous membrane of the epiglottis or vocal cords, soften, and ulcerate. Œdema glottidis is often caused by syphilitic inflammation, and the cartilages may become carious or necrosed. It is *said* that tubercular ulcers commence generally from below, and proceed upwards towards the larynx; but, in practice, the author has often found it very difficult to make the diagnosis between syphilitic and tubercular laryngitis, although sometimes the case is plain enough. There is aphonia and dyspnœa in most cases. The cough is short, and expectoration may be scanty or absent in some cases; in others it is purulent or tinged with blood. Asphyxia may take place rapidly from œdema glottidis. Deglutition is sometimes very difficult, especially when the epiglottis is attacked. At the North

London Consumption Hospital the author has observed two cases of syphilitic laryngitis suddenly expire from dyspnœa caused by œdema. Laryngotomy was tried in one case, but did not much prolong life. Large doses of iodide of potassium sometimes effect a cure, if given in time. In one case, a soldier who was brought to the hospital in a dying condition, and in whom aphonia existed in company with syphilitic sarcocele and cavity in the right lung, the iodide quite restored the man to health in a few weeks, and he left in two months almost quite well. Pressure on the larynx was painful in this case.

The *trachea* is by no means very rarely affected in syphilis of adults or in hereditary cases. The lower rings are usually the ones affected; but sometimes the lesion occurs near the larynx. Ulcerations and thickening of the submucous tissue occur, and leave narrowing of the trachea, so that even a quill will not pass. A severe case of this kind was in the Metropolitan Free Hospital in 1869, in a young girl aged fifteen, suffering from hereditary syphilis, in whom there was great narrowing of the trachea, and various other syphilitic lesions present. Small nodules have even been remarked on the walls of the bronchi, whilst there has been fibroid disease of the lung observed without any tubercle. The bronchi may be extensively ulcerated, and filled with pus from syphilitic ulceration. Whistling sound heard in inspiration is a clear indication of the lesion of the trachea, and auscultation reveals nothing abnormal in the chest. The use of specifics is indicated in affections of the trachea of syphilitic origin; but under any treatment the worst must be feared, as tracheotomy is usually contra-indicated, the disease being low down in the trachea.

Since the writings of Dr. Andrew Clark and others have drawn renewed attention to the old doctrine as to the compound nature of phthisis pulmonalis, we have begun to remember that the ancient writers asserted the same thing. Baglivi, writing in 1745, says that phthisis is very often a secondary disease after the principal diseases, as, for instance, after syphilis; and, in 1826, Van der Kolk speaks of certain ulcers or collections of pus in the lungs without any tubercle being present. It is now asserted by writers on syphilis, that the disease of the lungs occurs under two forms: firstly, that of interstitial pneumonia occupying the upper, middle, or lower lobes of the lungs; and secondly, where the tissue of the lungs is found hard, elastic, easily broken down, and non-crepitant in places. When such pneumonias are cured, a mass of fibrous tissue

remains. Gummy tumours are found in all parts of the lungs, in the form of greyish or yellowish white tumours, the size of a pea or nut. These soften, and leave cavities, just as tubercles do, but are not unfrequently cured, and leave the cicatrices so frequently observed in the lungs of persons who have died of syphilis. In the case of a female patient who died of what the author believed to be syphilitic phthisis, at the North London Consumption Hospital in 1868, there was a large cavity found in the middle lobe of the right lung, and cicatrices were found in the left lung, the tissue of which was indurated in several points, and non-crepitant. No tubercle was found in any part, but there were several small tumours in the left lung, about the size of a pea, similar to those seen in the liver in syphilis of that organ. In this, as in other instances of syphilis of the lungs, no dulness was observed on percussion, and the stethoscopic sounds were those of cavity in the right lung. The sputum was muco-purulent. In several cases that have come under the author's notice, there has been little to guide the diagnosis, save the occurrence of cicatrices in the pharynx, depressions on the skull, or syphilitic sarcocele; and post-mortem verifications have too often been denied. Such cases are eminently amenable to remedies, and large doses of iodide of potassium should at once be administered—as much as fifteen grains four times a day. Tuberculosis always commences at the apex of the lung, and progresses far more rapidly than syphilis of the lungs, which is one of the forms of chronic phthisis. The author has had no less than two cases of syphilitic phthisis under his care at one time at Hampstead. The one occurred in a soldier, aged about thirty, and the other in a man of about the same age, employed in a large wine store in Oxford Street. In both of these men there were extensive marks of tertiary disease over the body, and the lung symptoms were far advanced and threatened to prove fatal. Both cases left before the end of the cure could be seen. In one case, seen in 1867, two cavities filled with cheesy matter were found in the left lung, the lower lobe of which was indurated and noncrepitant. The upper lobe was healthy, and no tubercle existed anywhere. There cannot then be any doubt that, in many cases of pulmonary consumption, we shall find on careful enquiry, a history of tertiary lesions in other parts of the body; and this should make us more hopeful and eager to try therapeutic agents in the fell disease which carries off one-eighth of the population of the British Islands. For the most part the author has

found tubercular phthisis quite incurable, although occasionally very chronic.

Diseases of the nerves, too, are only now again beginning to be recognised as very frequently caused by the poison of syphilis. On this point, once more, the old writers knew more than many moderns, for Thierry de Héry, writing in 1634, described these syphilitic diseases of the nerves; and Van Swieten, of mercurial renown, says, in 1773, that he has frequently observed vertigo and even epilepsy caused by venereal contagion. In 1803, a physician named Cirillo guessed that epilepsy might be syphilitic. The dura mater is often attacked in syphilis of the brain, and is sometimes found adhering to the other membranes of the brain, when osseous lesions are present, and, perhaps, tumours of gummy nature. In a man aged fifty-two, who died in a fit of epilepsy, there was found, in addition to many marks of tertiary ulceration over the body, a tumour in the anterior portion of the left hemisphere in the dura mater, which it glued to the neighbouring parts.

The convex surface of the hemispheres is often attacked by diffused formations of cheesy consistence, and also the anterior part of the base of the brain. When the dura mater is diseased, hemiplegia may occur, or simply vertigo and headache when the cerebrum is attacked. When the cerebellum is implicated, vomiting may occur. In the case of a man who was brought into the Metropolitan Free Hospital in 1869, under the care of Dr. James Jones, there was right hemiplegia and aphasia, and the author made the diagnosis of diffused syphilitic inflammation of the base of the left hemisphere. There were abundant marks of syphilis in the patient to warrant the diagnosis of specificity. In cases of epilepsy, the dura mater is sometimes found very extensively attached to the pia mater by exudation of specific character. In place of true epileptic seizures, we may have the petit mal of the meninges, caused by syphilis, in the form of momentary loss of consciousness and vertigo, with or without convulsions. Dr. Brown-Séquard used to point out that syphilitic epilepsy was usually accompanied by unilateral convulsions. We find syphilitic epilepsy, as is most natural, in persons after the age of twenty-five; and, in all cases of epilepsy occurring in adults, we should take care to be assured what the history with regard to syphilis has been. Recovery, in the author's experience, is by no means unfrequent in such cases of specific epilepsy, if iodide of potassium and bromide of potassium

are steadily administered for a lengthened period. Some authors will have it that in syphilitic epilepsy there is not the same struggling observed as in the true epilepsy of the young, and that the somnolence after the attack is not so well marked. This may sometimes be true, but is not always so. In a gentleman whose case was long observed by the author, there were all the symptoms which usually accompany ordinary epilepsy, and these persisted for years, until the patient was put under treatment by iodides. After that the fits disappeared for many years, and have not, perhaps, returned at all. He had then healthy children. Syphilis sometimes causes partial softening or induration of the brain, or tumours may be found in the substance of the corpora striata. A case is mentioned by Dr. Hérard, of Paris, where two tumours were found in the right corpus striatum, of pinkish yellow colour. Others are found in the cerebellum or in the commissures near the periphery of the brain. Yellow patches are sometimes found in the ventricles. Apoplectic cysts are easily distinguished from syphilitic tumours of the brain. As remarked by Dr. Hughes Bennett, when the periphery of the brain is attacked, we find loss of memory, sometimes accompanied by loss of speech, and it would seem that insanity, or dementia, are by no means so uncommonly as has been asserted due to syphilis of the brain. Syphilis of the brain may produce any kind of paralysis that is producible by brain lesions. Low spirits are very observable in syphilitic persons with tertiary affections, and are doubtless produced by some such affections. They are common in women who do not speculate on the causes of their sensations. Vertigo, so much complained of by old persons, is oftener than we are aware of due to the presence of syphilitic deposit in the substance of the encephalon. Many cases of syphilitic hemiplegia and paraplegia have come before the notice of the author. Aphasia is frequently caused by syphilis, and diabetes and polyuria have been attributed to this Protean disease. In such cases we might expect to find some lesion in the cerebellum. Syphilis of the brain is much affected by treatment, and iodide of potassium will often be found to cure cases of epilepsy and vertigo which have resisted bromides of potassium or ammonium. This, however, is contested by some writers, who prefer the iodide or bichloride of mercury in syphilis of the brain. The author has such an unconquerable aversion to the use of mercury internally, from old observation of the evil effects of it, in syphilis, and other diseases, that he has never used it in any case of syphilis for many

years. In this opinion he is countenanced by Dr. Bœck and others of the Christiania school.

As to the diagnosis of syphilitic hemiplegia, headache, vertigo, and other symptoms yielding to iodide of potassium may help us, and the hemiplegia seen in this disease comes on with more warning than it does in cases of hæmorrhage or softening of the brain after embolism. Then, the want of the aura and complete loss of consciousness are *said* to be characteristic of syphilis. The palsies connected with syphilis are much more hopeful than many other varieties of paralysis, being amenable in some cases to the action of iodide of potassium, but there are too many of them which are incurable even by that potent specific. The most incurable lesions are those found in the base of the brain. Syphilitic affections of the cord usually occur in the dura mater. The cord may be turned into a substance resembling fibrous tendon, and the nerve cells obliterated, or it may be softened in cases of paraplegia from syphilitic myelitis. Cases of gummy tumours of the cord have been met with exactly similar to the nodules found in the liver (Wilks). Locomotor ataxia has been sometimes ascribed to syphilis. The author has met with several clear cases of paraplegic syphilis, and in most cases of paraplegia in adults he is generally in the habit of trying the effect of iodide of potassium. Sometimes the arms are affected, when the lesion is high up in the cord; sensation is often intact. Treatment, if immediately commenced, will be found efficacious in a certain number of cases, provided iodide of potassium be used without stint. It is the most curable of all forms of paraplegia. Galvanism (Stöhrer's continued current) should be used to the limbs. Compression of the nerves, at their point of exit from the cranium, may cause many affections of the cranial nerves. Small gummy tumours may be found in their course, in the coverings of the nerve, or even in the nerve itself. The optic, the fifth, and the third nerves are those most frequently affected. The author has seen numerous cases of palsy of the third pair at the Royal London Ophthalmic Hospital. Such paralyses usually occur far on in the history of syphilis. Ptosis, from syphilitic causes, is very common, and diplopia with strabismus far from uncommon. The sixth nerve is less frequently implicated, but the facial nerve is pretty frequently affected late on in the disease. In such cases the muscles of one side of the face are palsied. Fortunately, the administration of iodide of potassium is usually, though not always, a speedy cure in this last nervous affection. Aphasia syphilitica is not caused, as some

say, by the implication of the hypoglossal, which lesion, indeed, has not very often been seen to exist in cases of which the author has heard, but the fifth nerve is often affected in syphilis. In such cases we have tic douloureux of a violent description, usually in the infra-orbital branch of the nerve. Sometimes there is difficulty in mastication. Cases of partial paralysis and intercostal neuralgia have been traced by the author to syphilis, and, in particular, sciatica is not unfrequently a symptom of the poison. Thus, in doubtful cases of the latter painful affection, large doses of iodide of potassium should always be tried.

One of the most common and dangerous affections of the later period of syphilis is the rhinitis, which causes ozæna. The author has often seen the origin of this distressing affection misunderstood, to the great detriment of the patient, who might have been rapidly cured by iodides. One nostril is generally first attacked, and the patient complains of obstruction, and sometimes of pain at one point. The external integument may become red and inflamed. Then sero-sanguineous fluid begins to exude, and is often fœtid. When the inflammation is confined to the anterior part of the fossa, crusts are seen covering ulcers. But, unless checked, the disease gradually attacks the cartilages and bones of the nose, and may cause the nose to become flat and thin (sheep's nose). Altogether, this is a most serious lesion, and requires vigorous medication, with large doses—such as a scruple—of iodide of potassium, in a wine-glassful of water, thrice a-day, to cure it. Topical remedies are, the author thinks, not of much avail when the disease is deep-seated, but the iodide is in this case a perfectly wonderful specific. The author has not seen it fail in any instance, and can warmly recommend large doses of the salt in ozæna syphilitica. Scrofulous lesions of the nostrils resemble syphilitic in many points; with care, however, the diagnosis may generally be made out. But scrofula is, in some cases, so like hereditary syphilis as to be almost identical, and the author has recently had a case of ozæna in a girl aged fifteen, which completely puzzled him. It was much benefited by iodide of iron. The nasal canal has been long known as liable to become inflamed in syphilis, especially in the later periods. The bone not unfrequently becomes necrosed. The author has not unfrequently met with disease of the canals, with epiphora, in hereditary syphilis. In the case of a young woman of the age of eighteen, recently under his care, with interstitial corneitis, epiphora, and pegged and notched teeth, Mr. Couper, of the Royal

Ophthalmic Hospital, cauterised the canal in its whole length, and thus cured the epiphora. In some cases bridles are found across the canal, and the os unguis is not unfrequently attacked. Large doses of iodide of potassium will often effect a rapid cure when the affection is acute. There is sometimes ulceration of the eyelids in the later period of syphilis. Interstitial keratitis is not so rare in adult syphilis as some believe, but is very commonly indeed met with at the Moorfields Ophthalmic Hospital in hereditary syphilis. Cataract is by no means rarely caused in hereditary cases by syphilis; the author has seen several examples of this fact on the operating table in Moorfields. The author has been surprised to find, that M. Alfred Fournier of Paris, (August 1871,) has not met with any cases of hereditary disease of the teeth, as described by Hutchinson. Is this because M. Fournier does not see many opthalmic cases; or, because, in Paris this form of lesion is rare?

Loss of vision may be occasioned by caries of the sphenoid, or by syphilitic tumours pressing on the optic nerve. There may be complete loss of vision, too, from changes taking place in the interior of the orbit, and seen by the ophthalmoscope, such as contraction in the size of the arteries and atrophy of the papillæ. In such cases iodide of potassium is often powerless to prevent the supervention of blindness. The author has seen several cases of deafness in hereditary syphilis, but doubts whether deafness is often caused by syphilis in grown-up persons. There are, however, cases on record to prove that such deafness occurs. Mucous tubercles are, indeed, by no means unfrequent in the external meatus; and, when extensive, these growths may cause temporary deafness, which is easily remedied, however, by dusting the parts with powdered zinc or calomel, or touching them with nitrate of silver frequently.

CHAPTER IV.

SYPHILIS IN WOMEN.

Every person who is acquainted with the literature of the subject must be aware that the doctrine of dualism of the chancre has had most difficulty to contend with in the case of the female. All familiar with primary syphilis in the male know how comparatively easy a matter it almost always is to say whether a lesion on the genitals is likely to be followed by other symptoms or not. But it is also well known that this comparative certainty in diagnosis is not nearly so well made out in women, so that *unicists* have still a stronghold which requires to be taken by those who believe that syphilis is quite a different disease from soft chancre. Dr. Charles Mauriac, physician to the Hôpital du Midi, at Paris, has, in his notes to a translation of Dr. West's work on "Diseases of Women" —a translation which Dr. West has recently expressed his warmest admiration of—given some excellent hints as to the present position of the question, which are well worth noticing. He says that all great constitutional diseases, with multiple manifestations, which have the faculty of attacking all the tissues and organs of the body, present nearly the same appearance in the female as in the male. Syphilis is no exception; but it must be admitted that the predominance of certain forms of temperament, and particularly of the nervous temperament, with the conditions inherent in the manner of living, diet, and other habits, as well as the special conformation of the genital organs, exaggerate or lessen certain manifestations of syphilis in women.

It is comparatively rare that the male organs of generation become the seat of cutaneous or mucous syphilitic accidents. The rarity of syphilitic affections of the glans, the penis, or of the scrotum, becomes especially evident when compared with the frequency of the same lesions on the vulva. That is, in fact, the region where the local manifestations of syphilis appear first of all, before even the primary lesion has disappeared, and there also they relapse with desperate obstinacy, and are perpetuated indefinitely. If we look for the cause of this predilection, it is easily found in the

almost constant state of humidity, which the vulvo-uterine secretions, and the blood of the menstrual epoch keep up upon the vulva and the neighbouring regions. Let us add to these causes the juxtaposition of the diseased parts, their rubbing together, the thoughtlessness and carelessness of many women, the difficulty of isolating the surfaces, and keeping them in a state of cleanliness, and dry enough to prevent or diminish the causes of irritation, and we have, taken together, topical influences which explain a similar state of things; and the proof that the general or constitutional condition of the organism of the female does not play any part in the predominance of those syphilitic manifestations on the vulva is, that in the male we observe them when the same conditions are found united. In the anal regions of certain males who are uncleanly, either from the nature of their occupations, their character, or their indigence, we see all sorts of humid papules flourish. In smokers, and persons addicted to strong drinks, or fed on irritating diet, the lips, cheeks, tongue, and especially the fauces, become the seat of interminable eruptions of mucous syphilitic lesions, just as in the external genitalia of women.

The primitive accident of syphilis, the so-called *infecting chancre*, is formed by the same histological elements, and presents the same structure and the same progress in the two sexes. That is a fact which reasoning ought to make us admit *â priori*. Have not the tissues, the blood, and all the elements, the same chemical composition, and the same arrangement, in the female as in the male? Eruptions of measles, or variola, or scarlatina, present no difference in character in the two sexes. Why, then, should we suppose that the primitive manifestation of syphilis should not be the same in the two sexes? Still, superficial observations have led some to give out this hypothesis, as if it expressed a reality. These persons assert, above all, the frequent impossibility of making out any specific induration in women. But, whenever syphilis is introduced into the organism by other parts than the genito-urinary organs, do we not find in the face, in the lips, on the fingers, &c., the same architecture in the gates which admit it? Mr. James Lane, in a note to the author, says, "the rarity of induration in women has been much exaggerated." And, if in the case of the vulva we should notice some deviation from the classical type, why should we give to this the proportions of a radical anomaly, when it is only a very accessory phenomenon, and easily explained by reasons which do not

militate against the perfect identity of syphilis in the two sexes? Syphilitic induration, the pathognomonic value of which has perhaps been exaggerated, is frequent, and even of constant occurrence in the genital organs of women, not only when the primitive accident is concerned, but even in the later accidents of the disease. The form of the female organs renders them not so easily explored as the male ones. The patients, not being aware of the gravity of a lesion which appears insignificant because it causes no suffering, come only late to consult the doctor, when the induration of the tissues has disappeared. This accounts for the fact that even those persons who make a speciality of diseases of women, have so rarely seen indurated chancres in that sex. On the labia majora, however, the Hunterian chancre is often well marked, hard, cartilaginous, or wooden. Sometimes it is surrounded by an extent of œdema, which forms a sort of *selerema* of the parts. In women, as in men too, the multiple induration of the inguinal glands is scarcely ever found wanting in syphilitic infection. This is one of the best concomitant symptoms which may guide us to a diagnosis in difficult cases. When the syphilitic sore is on the labia minora, it is in most cases of the parchment kind, and we often find induration of the orifice of the urethra, as in the case of a patient at present under the care of the author at the Metropolitan Free Hospital. On the covering of the clitoris, it appears as slight erosions on a parchment-like base, or sometimes on a very hard wooden-like base. On the fourchette, or the fossa navicularis, or entrance to the vagina, the sores are parchment-like, very small, superficial, and non-ulcerated, so that it is not at all surprising that they are frequently overlooked. Ulceration is by no means the most common or most important symptom of the syphilitic sore. It is sometimes late in coming and very imperfect, whilst in soft sores the ulceration is very prominent. Soft chancres do not usually infect the constitution of women any more than they do that of men. These accidents remain only local. Of course, prostitutes are liable to have such sores continually, even when syphilitic, and thus it may easily be said that the origin of their syphilis was a soft sore. Mr. Morgan, of Dublin, denies this assumption, but in the male sex the prognosis is pretty certain in the immense majority of cases, and we must believe that this holds true for the female also.

The diagnosis of the syphilitic from the soft sore is usually easy enough in the female who is not a prostitute, unless when seated on the neck of the uterus or vaginal cul-de-sac. M. Armand Desprès,

surgeon to the Lourcine Hospital, expressed in 1870, in his "Traité Iconographique de l'Ulceration et des Ulcères du Col de l'Uterus," his belief, that indurated sores of the uterine neck do not differ in appearance from soft sores. This is probably a mistake. However this may be, the soft chancres of the neck of the uterus are almost always multiple, and sometimes phagedænic, and they may attack the interior of the cervix uteri. The existence of such a hidden uterine soft sore is only ascertainable by means of inoculation of the discharge from the os uteri, according to Desprès; but, since the experiments of Bœck, and lately of Morgan, have shown that the secretion from indurated sores and syphilitic discharges are sometimes auto-inoculable and productive of soft sores, this assertion of Desprès is untenable. Of course, a female, just as a male, may suffer from syphilitic sores, soft sores, and gonorrhœa, at one time. M. Mauriac says that he has had men at his consultations at the Hôpital du Midi, who had, after one connection, a gonorrhœa in two or three days, a soft chancre in three or four, and a hard sore at the end of twenty or twenty-five days. The small minority of soft chancres of the vulva are complicated by inflammatory buboes, which suppurate and become chancrous buboes. It is a curious fact that soft chancres of the uterine neck do not inoculate the whole of the vagina, and that internal suppurating buboes are not produced by them Mr. James Lane says that soft chancres of the uterine neck are very rare, Dr. Fournier is of a contrary opinion.

Among the earliest symptoms of syphilis in women are the hypertrophic and ulcerous *syphilides*. These are both very analogous to the skin eruptions. The former of these divisions includes the mucous plates, the flat papules, and the warty plates. The latter, or condylomata, may sometimes be mistaken for the simple warty growths seen in non-infected persons; but the diagnosis is made if we look narrowly into the case, when it will be seen that in simple warts the mass is formed by the agglomeration of hypertrophied papillæ, with long pedicles, which are separated from the adjoining pedicles by deep furrows; whereas, in syphilitic warts, the surface is mamillated rather than fissured, because the papillæ are enlarged in all directions, in breadth as well as in length. Simple warts will not go away unless excised, or treated with strong caustics, whilst syphilitic warts will soon disappear if astringent lotions, or powders of zinc or calomel, are used, with the addition of cleanliness. The ulcerated skin affections of the vulva resemble syphilitic ulcers of the fauces. Their form is very variable, from the most superficial

excoriation, in simple cases, up to deep ulceration in cases of malignant syphilis. They may easily be mistaken for soft chancres; but the latter are usually multiple, have suppurating buboes frequently, and are easily inoculated. Iodoform is a good dressing for these; it has only one disadvantage, that of its bad odour. Tertiary lesions of the vulva are, in general, seen only late on in the disease, in acquired syphilis; in hereditary cases, early. They produce either growths or ulcerations. The base of the ulcer resulting from the softening of the gummy tumour in this region presents a mammillated surface. The materials secreted concrete at the surface of the wound in the form of a yellowish false membrane, which is sometimes, as it were, gangrenous. The disorders resulting from the softening of such *gummata* are very quickly repaired under the influence of iodide of potassium. "The marvellously curative action of this remedy," says M. Mauriac, "indicates better than all the other characters, in doubtful cases, the specific origin of the lesion." The author completely corroborates the observation of Dr. Mauriac, as to the value of iodide of potassium in such ulcerations. It is not at all unusual to confound such ulcers with soft sores; but the latter are usually multiple, and are often complicated with suppurating buboes. Scrofula of the vulva may perfectly simulate syphilitic *gummata*, and the diagnosis is best made by means of iodide of potassium, in some cases in large doses, such as fifteen, thirty, sixty, seventy-five, and one hundred and twenty grains daily. Dr. Paul Spillmann's pamphlet, "Des Syphilides Vulvaires," Paris, 1869, and Dr. A. Fournier's, entitled "De l'Induration Chancreuse chez la Femme," in the "Annales de Dermatologie et de Syphilographie," 1870, may be referred to. In the case of syphilitic infection of women, the virulent disease often makes a violent attack on the nervous system. These nervous lesions consist in pains over the whole body, but especially in the face and upper limbs. There is along with these pains often a remittent kind of fever, with profuse night sweats. Anæmia is also common in syphilitic women; and Dr. A. Fournier has shown that there is analgesia of the skin in the dorsum of the metacarpus in some cases, combined with anæsthesia.

"A woman attacked with syphilis," says M. Mauriac, "is certain to give birth to syphilitic children—at any rate, during the manifestation of the early symptoms; it is very difficult to say what time this woman is likely to have healthy offspring." The author also believes that it is almost impossible to give anything like an accurate prognosis with regard to the time when syphilitic children are

likely to be produced. Careful treatment of the mother by means of iodide of potassium certainly seems to him to do most good in such cases; but, then, time is such an important element in this question, that the influence of drugs is not very easily made out. Professor Bœck confesses that syphilisation has not done much in this matter, and possibly Mr. Morgan may be ready to grant this also. Mercury is now abandoned by so many persons in the treatment of syphilis, that it is not likely again to be widely credited, as it used to be, with power to effect much here. Mr. James Lane, however, in a note kindly made on this passage, says "I believe this to be a case in which mercury is *especially* useful."

With regard to the question brought forward by Mr. Morgan, at the first meeting of the Surgical Society of Ireland, in 1871, the writer of these lines is of opinion, with Mr. Morgan, that the soft sore is related to syphilis, because the experiments of Bœck, Bidenkap, and others, which he has himself verified on more than one occasion, lead him to believe that inoculations from hard sores, mucous tubercles, or, according to Mr. Morgan, vaginal discharges, are able to produce the soft sore on syphilitic patients. This soft sore, in most cases, when inoculated upon persons free from the disease, would, in all probability, prove non-infecting, as Bœck says, from the intensity of the inflammation it causes plugging up the mouths of the vessels. Dr. McDonnell's ideas are very nearly those of the writer. Time and diverse circumstances have given to the soft and hard sores characteristics which make them as distinct from each other as small-pox from cow-pox. Theoretically, one may be a *unicist;* but in practice we give our prognosis as *dualists*. Dr. McDowell says truly that it is difficult to effect auto-inoculation of hard sores, and he remarks that the twenty-seven cases operated on by Mr. Morgan, were prostitutes; which, of course, renders them liable to have multiple lesions. Mr. Tuffnell's remarks show that prostitutes may give different sores to different men. Mr. Byrne, too, thinks with Mr. James Lane, that soft sores are sometimes followed by syphilis. Dr. Henry Kennedy states the matter well when he says that "the soft sore *may* infect, but the hard sore always does." Mr. James Lane here says, "Not always." As to generating syphilis *de novo* in a month if it were stamped out, this seems quite irrational to the writer. Mr. Croly, too, says with justice, that prostitutes may have several lesions, which fact complicates experiments made on them. Mr. Johnston's evidence as to syphilis only occurring once in any individual is valuable and convincing,

although Mr. James Lano is "certain that syphilis may occur twice in the samo individual;" and Mr. H. Leo and Mr. J. Hutchinson have given cases to corroborate this.

In a visit to Paris in August, 1871, tho author found M. Mauriac making extensive use of a saturated solution of chloride of zinc, for the cauterisation of soft sores. The parts are cauterised twice a week, and Dr. Mauriac observes, that the solution only affects tho parts deprived of epithelium, leaving tho othor parts alone, so that the solution may be used freely. Iodoform, also, was greatly praised by Dr. Alfrod Fournier, in cases of phagedaena in ulcers of tho vulva.

CHAPTER V.

DIAGNOSIS AND CAUSATION OF SYPHILIS.

In the tertiary period of syphilis, it is commonly said, the disease is no longer communicable; but there seems some vagueness in this assertion, since parents occasionally go on having syphilitic children for many years after any eruption on the skin, &c., has been noticed. In some cases, indeed, the secondary period passes quite unnoticed; so much so, that some authors seem to think that a good secondary eruption is rather a preservative against tertiaries. In a vast number of cases of syphilis, there are no tertiary symptoms seen; and even, in some few cases, the hard sore is followed by no symptoms. Malignant syphilis is occasionally seen, especially in infants, and also in adults. Recovery is the usual termination of syphilis in our days; and this shows that the disease is far milder than it was some centuries ago. Unfortunately, we possess no very good way of estimating when the disease is at an end; but the begetting of healthy children is a most important indication that the parental syphilis is at an end, the best of all perhaps. Bœck, in his learned work, "Recherches sur la Syphilis," seems inclined to lean to the idea that syphilis in the parents may lead to scrofula and other diseases in the offspring; and the author suspects that there is some truth in this view, although Mr. J. Hutchinson seems to wish to make out that actual syphilis in children is the only way in which the disease affects posterity. Some authors divide syphilis into common, benignant, and malignant. The last is a truly grave disease, and the chancre in such cases is not unfrequently phagedænic. Infancy, race, and unhealthy conditions of life, are frequently the antecedents of malignancy in syphilis. Virgin races seem to suffer much from malignant syphilis. Graves says that "syphilis and the abuse of mercury are the two causes which most favour the development of pulmonary phthisis." The author is not able to verify the dictum of Dr. Graves. Syphilitic

patients, according to Chassagnac, are not very liable to pyæmia.

The diagnosis of syphilis resides in an *ensemble* of points. Gummy tumours are usually diagnostic, but not always. Frequent dead births or abortions are apt to suggest or indicate syphilis in one of the parents. Glanders and farcy have much resemblance to syphilis; and the author has recently, during the epidemic of variola, been in considerable difficulty sometimes in distinguishing between cases of modified small-pox and syphilis. In glanders, however, the Schneiderian membrane is attacked at an early period. Cases of chronic glanders have been certainly taken for tertiary syphilis. Elephantiasis of the Greeks shows soft tumours, like gummata, in the face, larynx, and pharynx; but it is usually easily enough distinguished from syphilis, as the spots are of a dark red, not coppery, colour. Mercury may produce some symptoms analogous to those seen in syphilis. Eruptions occur in mercurial poisoning; ulcers of the mouth, tongue, or pharynx are seen, with necrosis of the maxillæ. There is fœtid breath in such cases, and often great trembling and pallor. Tertiary symptoms are not clearly caused, although they were much aggravated by the excessive mercurial poisoning of former years. Some writers speak of iodine as causing symptoms similar to those of syphilis. The author has not seen any such symptoms produced either by iodine or iodide of potassium. Scrofula is sometimes very like syphilis, but is more apt to produce abscesses, and the scars after scrofulous ulcers are deep, uneven, bridled, and coloured; whilst in syphilis they are white, smooth, and more superficial. But, sometimes, it is very difficult to distinguish between tertiary disease and scrofula.

PROGNOSIS.

The prognosis in cases of infantile syphilis is undoubtedly very grave, whatever be the treatment adopted. Maternal syphilis is said by numbers of writers to be far more fatal to the fœtus than paternal. The author, however, agrees with Mr. Hutchinson in denying the validity of this assertion. Syphilis diminishes the number of births, and destroys the infant. Diday thinks that very indurated sores are followed by obstinate eruptions; and these, again, most frequently, by tertiaries. But the author has not been able to verify, although he has attempted it, either of these assertions. It is, indeed, difficult to make any very good prophecy in these matters.

Women and old persons usually suffer more from syphilis than young men do; and Dr. Paulet, of Paris, informed the author in 1867, that among the troops under his care, he scarcely ever saw iritis or tertiary symptoms. M. Paulet did not use mercury, but only iodide of potassium. Syphilis is, probably, far less severe now than it was in 1505, when Cataneus described it as a monstrous disease, "which so attacked the human race, that any form of death was more to be chosen;" but, probably, syphilis was never more widely spread among the poorer classes than at present, in London at any rate.

CAUSATION.

The virus of syphilis is not volatile, as in other diseases, but is probably contained in a fluid. This poison circulates with the blood, —and "rather in the blood corpuscles than in the serum," says Lancereaux, who seems to believe that women are occasionally affected by the fœtus—during a certain undetermined time in a syphilitic person's history. It was only in 1835, that modern writers were compelled to recognise that secondary symptoms were contagious, although ancient writers knew this very well. As a general law, the products of diseased secretions in syphilis are only contagious if these are specific. It is not quite clear, for instance, that a soft sore on a syphilitic patient, even with secondary eruption, would cause syphilis in another non-syphilitic person. Mr. Morgan's experiments, have been narrated in Chapter II. Mucous tubercles are the most contagious of all secondary eruptions, and then come pustular syphilitic skin diseases. Tertiary ulcers seem scarcely ever to be contagious. Dr. Bumstead, however, is not quite of this opinion. ("On Venereal Diseases," p. 477.) Inoculation with the blood of patients with secondary eruption is now known to cause syphilis in healthy persons, since Dr. Waller, of Prague, on the 27th July, 1850, inoculated a boy, aged fifteen, with the blood of a woman affected with secondary eruptions. On the 31st of August, tubercles were observed at the inoculated point, and secondaries followed. (See Fournier, "L'Incubation de la Syphilis.") Again, in 1862, Drs. Bargioni, Passiglia, and Rossi were inoculated on the 6th of February, and on March 3rd Dr. Bargioni had a papule, with hard base, and swollen glands in the axilla, which were followed by secondary eruption. The woman, with whose blood this courageous physician was thus inoculated, had mucous tubercles of the vulva. On

the 3rd of March, a small papule, round in shape, and of a deep red colour, was seen on Dr. Bargioni's arm. On the 11th, it was covered with silvery scales; on the 14th, two glands in the axilla, the size of hazel nuts, appeared. On the 22nd, there was an ulcer, funnel-shaped, and nearly dry. On the 26th, the induration was well marked. On the 12th of April, there was roseola and enlarged cervical glands. This question is now settled.

There can be no doubt (and the author has seen several examples of the fact) that syphilis contracted by a pregnant woman is not always transmitted to the fœtus, although it is very difficult to say at what month this is usually likely to ensue; but, when the father has syphilis, and impregnates without infecting a healthy woman, does she ever become affected by means of the fœtus? Hutchinson has given some doubtful evidence of the latter fact; but many deny it. It is not clear that the milk of a syphilitic woman is ever virulent, and tears, saliva, or sweat, are, in all probability, free from the poison—as inoculations made with these fluids have usually produced negative results—unless when any of them are mingled with secretion from mucous tubercles, or ulcers of a specific nature. Kissing is a frequent source of contagion; and the author has seen many instances of indurated sores on the lips thus caused. Sleeping with persons affected with secondary eruption occasionally gives the disease. Examination of women in labour has, in some instances which have come under the author's notice, caused the disease in medical men and midwives. It is by no means very uncommon to see syphilis communicated either to or from the nursling. The author saw two cases of communication of syphilis from the nursling to the nurse in the course of one year at the Metropolitan Free Hospital of London. In one of the cases, the nursling infected two young women of a Jewish family, under the care of an able surgeon, Dr. D. Dyte, of Bury Street. It has been remarked, and not yet contradicted, that syphilitic children who are suckled by their own, *apparently* healthy, mothers, do not contaminate them. Dr. A. Fournier showed the author (August, 1871) a nurse with an indurated sore on the breast.

VACCINE SYPHILIS.

Owing mainly to political reasons, connected with the enforced vaccination of all children in Ireland, Scotland, and recently in

England, a number of wild and unfounded charges have been made against the practice of vaccination altogether. The mass of medical men, knowing too well the terrible dangers which arise from neglect of this greatest of all prophylactic measures, have been of late, in London at any rate, disposed to question the possibility of syphilis ever being communicated by means of vaccination. The author believes that such an occurrence is infinitely rare; but it would be to deny evidence altogether, were we now-a-days to dispute any longer the facts known to science in this matter. In 1841, a child near Cremona, of syphilitic parents, furnished lymph for sixty-four children, and most of these were infected. Of these, fifty-four recovered, and eight died. ("Cerioli Gazz. M. de Mil.," Oct. 1843.) In Germany ("Med. Zeit.," Apl. 3, 1850) a veterinary surgeon vaccinated ten families, and nineteen out of twenty-four persons took syphilis. It seems, according to Viennois and H. Lee, that blood was mingled with the lymph in all of these cases. In 1861, at Rivalta, near Turin, a child four months old was vaccinated with lymph from a tube, taken by a public officer at Acqui. Ten days after this, lymph was taken from the pustules on the child, and used to vaccinate forty-six children, all quite healthy. On June 12, seventeen other children were vaccinated from this lymph; and, of the sixty-three children vaccinated, not less than forty-six had syphilis, and twenty mothers or nurses were affected. Mr. Jonathan Hutchinson has recently (Medical and Chirurgical Society of London, Transactions, 1871, and "Doctor," June, 1871) related two instances in which syphilis was communicated to adults from syphilitic infants. In the first instance, thirteen adults were vaccinated with the lymph from one child, and eleven of these had hard chancres, enlarged glands in the axilla, and other probable signs of syphilis. At a second meeting of the Society, Mr. Hutchinson mentioned cases brought before his notice by Dr. Lamprey and Dr. Tay. We may then say that the case has been fairly heard and proved: only remarking, as a caution to vaccinators, that it seems likely that the lymph, in such cases, has often been mingled with blood, and that the time for drawing off the lymph in Continental countries is too long (ten days). The lymph, it is to be noticed, is less contaminated with pus or blood on the eighth day, when vaccination should be performed from arm to arm, or points armed and tubes filled. Cupping, tattooing, and catheterism have all been known to inoculate syphilis, and speculums and syringes have doubtless often conveyed infection to

many unsuspecting victims. Glass-blowers are, it is said by authors, often infected from the mouths of their fellow-workmen, and tobacco pipes and drinking glasses have often been vehicles of contagion. Sleeping in a bed which has been tenanted by a syphilitic patient is not safe. The disease almost always commences with an ulcer. Fournier found this true in one thousand and thirty-three out of one thousand and forty-six patients. The induration after contamination from secondaries is as hard as after primary ulceration, and is quite as likely to be followed by grave symptoms.

HEREDITARY TRANSMISSION.

Mr. Hutchinson of London is the greatest authority on this branch of the subject, and the author has usually been able to verify that gentleman's inductions, in his own experience at the Metropolitan Free Hospital, which is classic ground, since many of Mr. Hutchinson's observations on syphilis were made there. Mr. Hutchinson (Reynolds' "System of Medicine," article Syphilis) says that from a fortnight to two months usually elapses before syphilis appears, after birth. "It is very common for a man who has no syphilitic symptom of any kind, and appears in perfect health, to beget a syphilitic child." He also says that, "in all cases of constitutional syphilis—whether during the secondary or tertiary symptoms, or even during a protracted period of latency—an individual may become the parent of a tainted child. The degree of severity of the taint will be in proportion to the shortness of the period which has elapsed since the disease entered the system. A child may inherit syphilis in a severe form from but one parent; from its father alone, or from its mother alone. When both parents are the subjects of syphilis, a child is more certain to suffer than when only one is so. We have no data, as yet, on which to ground an opinion as to whether a child is more likely to suffer less severely when its father is the source of contamination, than when it derives the disease from its mother, or the reverse. In a large proportion of the cases met with in practice, the taint is derived from the father only." Mr. Hutchinson also asks whether syphilis may not be transmitted to grandchildren. Ascites from liver disease is not very uncommon in hereditary cases, according to the same observer. In children of syphilitic parents there is often diffuse stomatitis and interstitial corneitis, which has no parallel in the acquired disease. Deafness is not uncommon in

inherited cases. The shape of the teeth resulting from stomatitis is figured in the article above referred to. The author is quite convinced that Mr. Hutchinson has proved his point, as to the indications of inherited syphilis; although, in Germany, a few able oculists seem to refuse their assent to his conclusions. In numerous instances, the author has seen bone disease, ulcers, and disease of the trachea and larynx as the consequence of hereditary syphilis; and the Moorfields Ophthalmic Hospital out-patients cannot be watched for a month or two, without the observer becoming convinced of the connexion of various lesions of the eye and its appendages with this taint. Cataract, corneitis, and retinitis are all frequently seen in that hospital as parts of the history of inherited syphilis.

Many women with secondary syphilis become subject to amenorrhœa for months from the disease. "Both parents," says Fournier, "should be interrogated, when a wife aborts frequently." If the mother be treated by large doses of iodide of potassium, in many cases the future offspring will be healthy. The author has given iodide of potassium for this end for nine months at a time, with great success, in some instances.

Many excellent observers entirely refuse credence to the views held by Hutchinson and others, and above alluded to, as to the possibility of a woman bearing a syphilitic infant, unless she herself is contaminated. One of the most strenuous opponents of such a view is Cullerier of Paris; and that author has many eminent followers in this opinion, among whom may probably be counted Dr. Adam Owre of Christiania, Mr. Berkeley Hill, and many of the very best observers in Europe. Paracelsus writes, in 1536, "*transit a patre ad filium.*" Fallopius in 1535, speaks of "*pueruulos nascentes ex feminâ infectâ.*" Hunter denied that the disease was hereditary. Astruc recognised that the father might infect the fœtus, even if the mother were healthy, although more rarely than when she herself had syphilis. Swediaur relates a case in corroboration of this opinion. Diday ("Traité de la Syphilis des Nouveau-nés et des Enfants à la Mamelle," Paris 1854,) gives cases to prove that a syphilitic father is alone necessary in many instances to the production of syphilitic children. Trousseau ("Union Med." t. ii. p. 457, 1852) has given similar cases. On the other hand, Cullerier (Mém. de la Soc. de Chir. 1857, t. iv.), followed by Notta (Archiv. de Méd. 1860) and Charrier (Archiv. de Méd. 1862), entirely and categorically denies that syphilitic infection of the fœtus by

the father *ever* takes place, unless the father first *directly* infects the mother. The cases cited by Cullerior and others, are most valuable, but are, of course, chiefly negative facts. The author has been well aware of the controversy on this point for very many years, and has minutely examined all the mothers of syphilitic children that have come before him. The result of his observations has been to convince him, that a *few* mothers of syphilitic children have never had apparently any symptom of having been themselves infected with the disease. Hence, on the principle of "*de non apparentibus, et de non existentibus, eadem est ratio*," he does not quite see what right Cullerier and others have to say so certainly, that the mothers of syphilitic children *must* themselves be syphilitic, without showing that such women have always had some symptom of the disease. Lancereaux takes this view of the matter. The author is very anxious, however, to state his own opinion on this matter with becoming humility, since the question is much and very warmly disputed, but he must add that in his experience the *very great majority* of syphilitic children have syphilitic mothers. Among other cases, one seen by the author in 1867, a woman brought a child suffering from interstitial corneitis, with pegged and notched teeth, and with a history of having been affected with eruptions and snuffles in infancy. The mother had no history of syphilis; but the father had suffered from eruptions, sore throat, and other symptoms of syphilis before marriage. Some years after this the mother, having become separated from the father, contracted syphilis from another man; and was sent by the author, in 1871, to St. Bartholomew's Hospital, where she was under the care of Mr. Holmes Coote for roseola, mucous tubercles, sore throat, &c., for some time. Unless it be said that the woman might have contracted true syphilis twice, this seemed to the author a clear case of infection of the fœtus by the father alone. Mr. Hutchinson's assertion, that the father *often* infects the mother by means of the fœtus, demands careful attention, coming as it does from such a man; but the author would not like to assert categorically, that *any* case of the kind has been noticed by himself, which he would like to quote, in the face of the sharp criticism which now exists on these points. Practically, the medical man will rarely be in error, if he assure any male patient, who may have suffered from secondary syphilis some years previously, that his children are likely to be quite healthy; but in one case a man with secondary eruption did certainly, in the

author's experience, infect his non-pregnant wife six years after he had himself suffered from a hard sore. And if a female patient be treated with iodide of potassium when suffering from roseola or other secondary symptoms, the prognosis is often good *after the first child is born;* which, however, will in *very many instances* be an abortion or a dead birth. The author would be glad to be able to assert with certainty, as some do, that a syphilitic father could never have a syphilitic child, without his wife first suffering; but he believes that perfect certainty on this important question is not yet arrived at. In variola the fœtus is *often*, but not *always*, found healthy after the death of the mother from confluent small-pox; and the word *never* is rarely admissible in questions relating to physiology.

RECENT OBSERVATIONS ON SYPHILIS BY DR. A. FOURNIER.

The author is unwilling to leave that part of the subject which relates to the pathology of syphilis, without taking notice of some of the recent observatiens of Dr. Alfred Fournier of Paris, a gentleman who, having been one of the most distinguished pupils of the great master, M. Ricord, has not been contented to rest where the renowned surgeon of the Hôpital du Midi left off, but has added many new facts to those already known to the medical world. Dr. Fournier, having paid great attention to the writings of the early syphilographers, has come to the conclusion, founding his opinion especially on the works of Jacques de Béthencourt, who wrote about the year 1527, (oral communication in August 1871,) that syphilis *is* a new disease, and that it was unknown before the end of the fifteenth century. He is passing a work through the press at present, to prove this point; and it must be admitted that, of late years, evidence in favour of this conclusion has been accumulating. (See Gaskoin's translation of Villalobos, London, 1870, and also chap. iii. of this work.) According to Dr. A. Fournier, in a pamphlet published in 1867, "Etude Clinique sur l' Induration Syphilitique Primitive," syphilitic sores are liable, after having become quite cicatrised, to break out into open ulceration again. This ulceration, he adds, is contagious, as might be expected, and produces an indurated sore on virgin subjects. Sometimes it happens, and especially in the region of the frenum, that, when large masses of induration occur, the centre of the mass becomes soft, and the cavity

empties itself by one or two little passages through the surface of the cicatrised ulcer. It is to cases of this kind that Babington must have referred, M. Fournier thinks, when that author speaks of syphilitic induration preceding in general the ulceration of the sore. Babington said that the character of venereal infection consisted essentially in an *induration*, passing afterwards into ulceration. Clinically, the first rudiment of the chancre is certainly an erosion, and not an induration. In fact, it is often very difficult to be certain that herpes is not syphilis, or the contrary, in the early stage of the disease; and herpes is, as everyone will confess, a simple superficial erosion of the integuments. If syphilis commenced with induration, this difficulty in diagnosis would not exist. Mr. Berkeley Hill thinks that Babington is quite right, as he has met with several cases where induration has preceded erosion. It has frequently been stated in books, that hard chancre may be obtained twice; and examples of the kind have been published in many well-known text-books on syphilis. Dr. Alfred Fournier, whilst admitting the possibility of such a fact, (and having seen at least one instance in his own practice,) has well shown, in a pamphlet entitled, "Du Pseudo-Chancre Induré des Sujets Syphilitiques," (Paris, 1868,) that it is by no means very rare to find syphilitic persons, who, without any new infection whatever, see again reproduced, either on the penis or on the mouth, lesions exactly similar to those of the hard chancre, as it is seen in virgin subjects. In most cases, these pseudo-chancres, however, have no effect in causing induration of the neighbouring glands; although that symptom sometimes is present, as indeed it frequently is in secondary and tertiary sore-throat, &c. These ulcerations, just like ordinary chancres, repose on an indurated base; they are circumscribed and of slight extent, often merely superficial, with adherent edges, and greyish, polished, or pseudo-membranous floor, so as to deceive the most experienced eye. Such pseudo-chancres have been seen to appear four, five, six, or seven years after the first infection; and they often occupy the very point where the original sore appeared. They are generally single, and occasionally the whole of the gland may become hard, as if there were a cap of cartilage just beneath the epidermis. Induration, says M. Fournier, with truth, cannot be considered as proper to syphilis. Far from this, "it is common to various lesions, and to different epochs of syphilis." Microscopists, in fact, say, that "the indurated chancre exactly resembles gummy pro-

ducts." (Virchow.) The pseudo-chancre appears frequently, whilst patients are suffering from other symptoms of secondary syphilis, such as mucous tubercles of the mouth or tongue, &c.; and, in eighteen out of twenty cases observed, there was no affection of the neighbouring glands, which are always indurated in true hard sore. In several of the cases cited, there was no chance of the patient having been infected by a new contagion. Let us apply these observations to the question of second attacks of syphilis. If a patient were to show, after several years of immunity from symptoms of syphilis, a doubtful chancre, resembling a hard sore, and this were followed in a few weeks by roseola, cervical adenopathy, and pustules in the hairy scalp, &c.—then, indeed, it would be almost absolutely certain that he had contracted a second attack of syphilis, just as other patients have two attacks of variola or of measles. But it is rare, indeed, that such unmistakeable cases have been recorded. And many of those contained in books are explicable, by supposing that they were cases of pseudo-chancres seen in the course of the disease. Such patients should always, if possible, be confronted with the persons supposed to have infected them, who will often be found to have no syphilis capable of causing the supposed hard chancre.

In a "Note sur les Lesions des Gaines Tendineuses dans la Syphilis Secondaire," (Paris, 1868,) Dr. A. Fournier says, that lesions of the synovial sheaths of the tendons are far more common in the course of secondary syphilis, than we might suppose from the silence of writers on this point. Women are more subject to such lesions than men are; and it is not unusual to find the extensors of the fingers or toes affected. The bursæ of the tendo Achillis, of the biceps, and of the peroneal muscles, also may be affected. Sometimes, there is simple dropsy observed, without redness of the integuments, or pain; at other times, there are inflammatory symptoms, with pain on pressure, and redness of the skin. We find a swelling of an elongated form on the course of one of the tendons, with pain, when the tendon is exercised. The parts of the biceps attacked are the muscular belly and the tendon at the elbow, according to Mr. Berkeley Hill. These affections of the tendinous sheaths are usually observed during the first months of the secondary period of syphilis; and at the same time headache, alopecia, and sore-throat. In the case of a young woman, aged twenty-seven, in the Lourcine, in 1868, with indurated sore on the vulva, followed by secondary eruptions, there appeared, in

about a fortnight, pains in the left knee, with swelling of the joint, resulting from effusion into its cavity. This was succeeded by pains in the left foot at the lower extremity of the tibia, in front, where a very evident swelling was noticeable, four or five centimetres long, by two or three in breadth, following the course of the extensor digitorum communis; evidently a synovitis of the sheath of the tendon. The sheath of the biceps brachii is frequently affected, and patients complain of pain when the forearm is extended.

There is an affection of the soft palate occurring in the course of late secondary or tertiary syphilis, which has not had its fair share of attention from writers. In a clinical lecture on "La Syphilis Gommouse du Voile du Palais," (Paris, 1868,) Dr. Fournier observes, that this is a most urgent disease, where expectation or hesitation is most disastrous to the patient. (The author can fully corroborate this remark.) A female patient, aged twenty-six, entered the Lourcine Hospital on the 30th April, 1868, with an immense destruction of the soft palate and anterior pillars of the fauces. It was only at the end of the previous month, that she had noticed a kind of tickling in the throat, and difficulty in swallowing. On the 15th April, the patient went to bed, speaking well; but, on rising, she could not speak clearly, nor could she swallow easily, since all fluids were partially expelled from the mouth. The diagnosis of the lesion lay between that of scrofula and syphilis. Now, in syphilis, the throat is a favourite seat of such phagedænic ulcerations; far more than is the case in scrofula; but this is merely a numerical reason, and the very case before us, at any time, may be the exceptional case of scrofula. There is nothing specific in the aspect of a syphilitic ulceration, to distinguish it from a scrofulous ulceration of the mucous membrane. Thus, Dr. Bazin of the Hôpital Saint Louis observes, with perfect truth, that "nothing is more variable than the physical characters of scrofulous ulcers in general; and, when malignant scrofula commences in the pituitary membrane, the septum of the nostrils, the velum palati, or the palatine arch, I declare to you sincerely, in this case the diagnosis is sometimes so obscure, that we must remain in doubt." Mr. Berkeley Hill doubts whether any one has ever seen a scrofulous ulcer of the palate. In the case cited by Dr. Fournier, there was no evident history of syphilis; there were no skin eruptions, nor alopecia, nor history of sore-throat, &c., to be gleaned from the patient herself. Of course patients, and especially female

patients, are often not to be believed, when they are questioned about syphilitic accidents, and answer negatively; but, in addition to this, syphilis is sometimes so slight a disease, that, possibly, the patient herself might have mistaken the sore-throat for ordinary angina, and any slight alopecia for thinning of the hair which is so common in many other diseases. Chancres are often only very slight lesions, which become cicatrised spontaneously in a short time. Roseola is sometimes totally unnoticed by patients, and, generally, is pointed out to them by the medical man. So that a female patient may have had syphilis without knowing it, and thus, with the best faith, deny having had it. It also happens, more frequently than people seem to believe, that syphilis, after the first accidents, stops all at once; and appears, as it may be expressed, to be wiped out, never to return, or possibly to re-awaken in tertiary symptoms in later years. This case, too, may have been an hereditary case. It has been said by some that the hereditary manifestations of syphilis cannot be reproduced after a certain early age. No one thinks it, however, extraordinary, when a man, who contracted syphilis at the age of twenty, has an exostosis, or caries, at the age of fifty. On the other hand, an infant contracts syphilis in its mother's womb; is it surprising if some similar lesion should be produced on this child after fifteen, twenty, or thirty years have passed? Certainly not. In the Hospital, the Hôtel-Dieu, a great number of syphilitic new-born children are seen yearly. Many of them die, some have lived. Are these latter cured, because they have at this moment no symptoms? We cannot believe this. And if one of these were affected, after fifteen or twenty-five years, with a tertiary lesion, how would the doctor who treated it find out the origin of this syphilis? There is, however, another point in the diagnosis of this case, and that is the effect produced on it by the use of iodide of potassium. After a few days of treatment by *large doses* of this salt, the parts assumed a healthy appearance. Now, the iodide does *not* cure in this way, and with such prodigious rapidity, other ulcerations foreign to syphilis. Dr. Hérard says truly, "I ask all those who have had occasion to treat scrofula of the bones, or malignant lupus, by preparations of iodine, can anyone compare the slowness and uncertainty of results in such cases, with the promptitude and clearness of the results obtained in syphilitic patients?"

With regard to the early symptoms of gummy tumour of the

velum palati, Dr. Fournier says, that "what is observed most frequently, is *diffuse infiltration* of the velum palati, and not a circumscribed tumour as some authors describe. The velum palati becomes red, glistening, and tense; rigid and hard to the touch, and motionless." There is scarcely any pain, and hence the great danger, as most patients suspect but little of the mischief progressing in their throat. When once ulceration takes place, it proceeds with frightful rapidity, since the mucous membrane has been diseased for some time, and almost destroyed at the moment when it becomes perforated. When once cicatrisation has taken place, it is not rare to see the stump of the velum palati become gradually horizontal, and attached laterally to the walls of the pharynx, so that the two organs, velum and pharynx, form a common vault, pierced at the posterior part by an orifice of communication with the posterior nares. When this takes place, the voice (duck's voice) becomes more natural, and the patient can again swallow with facility. The voice however usually retains somewhat of a nasal twang; although the infirmity may be remedied to some extent, by using a gutta percha artificial velum palati, adapted to the teeth, as in the American process for false teeth.

Syphilis in the secondary period is, in reality, more visceral than it is in any future period, as is proved by the fever it arouses, and also by the analgesia and anæsthesia of different parts of the body caused by the poison circulating in the blood. In a pamphlet entitled, "De l'Analgésie Syphilitique Secondaire," (Paris, 1869,) Dr. Fournier brings forward many cases to show, how commonly women are affected by analgesia, in the course of secondary syphilis. Reasoning from what takes place in other intoxications, Fournier determined to try what effect syphilis had on cutaneous sensibility, and he was quite astonished to find that, in a very large number of patients at the Lourcine Hospital, sensation was altered in a very notable way. Indeed, in women, syphilis in its secondary period commonly determines diverse troubles of general sensation.

Sometimes sensation of pain is much deadened (*analgesia*); at other times want of sensation is joined to this; and sometimes, too, the temperature of various parts is lowered. Sometimes women are so profoundly analgesic, that a pin may be thrust into any part of the body without their feeling pain, whilst the ordinary sensation may remain quite intact. Anæsthesia cannot exist alone, as analgesia can. Some women are almost insensible, when attacked with secondary syphilis, to difference in temperature. An

algesia is most commonly met with, and may be general from head to foot, or only limited to certain regions, such as the hands, feet, mammary glands, and wrists. The back of the hand is most affected in general, and sometimes this part only. When other parts are gradually returning to their normal condition, this part sometimes remains alone without the sensation of pain, for some time. Syphilitic analgesia is generally merely cutaneous and symmetrical; and usually occurs during the first month of the secondary period, lasting weeks or months. It is not, indeed, very remarkable that syphilis should produce such disorders in sensation, when we notice how it affects the nervous system of women in other ways. Like effects are produced in poisoning by lead, arsenic, alcohol, &c.

One of the most disputed points in the history of syphilis is that which relates to the interval which may elapse between different outbreaks of the disease. Dr. Alfred Fournier has thought it worth devoting a pamphlet, entitled, "Note sur un Cas de Gomme Syphilitique survenue Cinquante cinq Ans après le Début de l'Affection," (Paris, 1870,) to this very important and delicate point. A gentleman at the age of seventeen contracted syphilis, according to Fournier; and, when of the age of seventy-two, he consulted that gentleman for a tumour on the thigh, which was pronounced to be syphilitic, and rapidly got well in three weeks under doses of iodide of potassium. Three years previously the patient had syphilitic caries of the upper jaw. He had, at the age of seventeen, suffered from chancre and secondary eruptions, and had been told by the medical men that he had syphilis. Since that time, he never had observed *any* symptom of syphilis, up to the age of sixty-nine; nor had he ever contracted gonorrhœa, nor other ulcerations of any kind, during his lifetime. Thus, fifty-five years intervened between the first syphilis and the gummy tumours in the thigh, during nearly all of which time syphilis lay hid in the system. Of course, some persons have objected to this inference, alleging that the patient might have contracted a second attack of syphilis without knowing it. This is very unlikely in the case of a man, who, like the patient, was well-educated and observant. On the whole, we may be inclined to admit, that syphilis may remain latent any length of time in the system, the more readily when we consider that second attacks of the disease are so very rare, and that women, in some cases, seem never to give birth to healthy children after once being syphilitic.

That secondary syphilis sometimes causes loss of appetite has long been known; but it is only in quite recent times, that it has been remarked as a cause of still stranger disturbances of the functions of nutrition. Thus, Dr. Alfred Fournier has written a most interesting "Note sur certains Cas Curieux de Boulimie et de Polydipsie," (Paris, 1871,) in which he mentions that, in certain cases of secondary eruptions, in women, there is a temporary exaggeration of appetite. A scrupulous study of fifty observations occuring in three years, has convinced him that, in such cases, boulimia has resulted from syphilis, and generally appears at an early period of the disease. In some cases, the female patients in the Loureine desire to eat and drink the whole day long. This symptom is rare indeed in males, although it does occur in very young men occasionally. It always occurs in company with other nervous affections in female syphilitic patients. In one case, that of a young woman, aged twenty-three, the patient complained of extraordinary appetite, the like of which she had never before experienced. According to her own expression, "she devoured." Simultaneously with boulimia, there appeared fever, with pulse 120, and a temperature of 38·4 C. in the axilla, with polydipsia and diarrhœa. The coincidence of a voracious appetite with febrile symptoms, almost amounting to typhoid in character, was very remarkable, as also the fact that the tongue remained quite free from any deposit. We learn from some of these patients that they are famished in an extraordinary way; that, in place of eating four or five hospital portions, (a quantity of food amply sufficient for an adult in good health,) they can eat as many as six, seven, eight, nine, ten, and even sometimes more. The ration of a patient in convalescence in Parisian hospitals at present is composed of four portions: white bread, four hundred grammes; two soups of thirty centilitres, one a meat soup, the other without meat; meat, two hundred and ten grammes; vegetables, forty centilitres; wine, thirty-six centilitres, or, if patients desire it, wine, eighteen centilitres, and milk, one litre. This is amply sufficient for most of the female patients in the Loureine; but boulimic patients, in addition to eating the double of this, greedily devour what their companions leave. One of these patients mentioned that, one day after breakfasting well, better than most persons in good health, she at once commenced a second breakfast quite as large, on the food left by her companions. Another eat daily twelve portions of bread, not to speak of her ration of meat and vegetables,

and yet "could have eaten far more, if she had only listened to her appetite." This boulimia is usually accompanied by great thirst. Such patients drink two or three litres a day. This exaggerated injection of food is, in some cases, followed by no very bad result; at other times it produces colic, nausea and vomiting, dyspepsia, and diarrhœa, which is the most common symptom. Tho diarrhœa is in some cases singularly obstinate, unless the patients eat less; but they expressed themselves as being so hungry, that they must oat at every hour of the day, and even of the night. These symptoms of boulimia sometimes remain in patients for many months. In one case it lasted as long as seven months, although the patient was treated first by iodide of mercury pills, next by injections of corrosive sublimate, which gave her much pain, and lastly, took as much as twelve grammes of iodide of potassium daily, *i.e.* three drachms of the salt in twenty-four hours. This patient retained her good looks, and did not lose flesh; but, in many cases, patients become thin and weak during this boulimia. Certainly, one of tho most extraordinary facts in the boulimia of secondary syphilis is, that it sometimes is noticed, as above stated, with marked febrile symptoms. Thus, patients laid up in bed by fever, where the pulse rises to 120, and the temperature in the axilla to 39,—39·5—39·8 C., are sometimes tormented by the anguish of an extraordinary appetite, and absorb a quantity of food double, triple, or quadruple what would suffice for them in health. Thus, in one case noticed at the Lourcine, a girl, aged eighteen, with cutaneous and mucous syphilitic eruptions, had well-marked boulimia, coincident with febrile symptoms, which at first were intermittent and then continuous, and with profound prostration, algidity of the extremities, and pains in the limbs, with sleeplessness and profuse sweating. At the same time, she had palpitation of the heart, irregularity of the pulse, with gastralgia, nausea, headache, and analgesia. The temperature in the axilla was sometimes as high as 39·8 C. There does not seem to be any special treatment beneficial in such cases, and Dr. Fournier looks on the phenomenon as a nervous affection. Many persons will be sceptical as to these boulimic cases.

Mention has been made on several occasions, of fever occurring during the secondary period of syphilis, and Dr. Courtaux, a pupil of Dr. Fournier, has quite recently written his "Thèse pour le Doctorat en Médecine," on the subject of syphilitic fever. According to this able thesis, secondary syphilis attacks not only

the skin and mucous membrane, but also the muscles, bones, the sero-fibrous, the central, and peripheric nervous systems, the membranes of the eye, the digestive organs, the circulatory organs, the uterus, and the embryo it contains. Besides the fever which precedes other symptoms, syphilis is often complicated by a febrile state, which is observed either concurrently with an eruption, or apart from any eruption. Syphilitic fever did not escape unnoticed by the first observers of the "new and unknown disease," although Nicolas Léonicène and Gaspard Torella, writing in 1497, speak of syphilis as apyrectic. Jean de Vigo (1514) speaks of a *petite fièvre* in syphilis, which being sometimes superadded to the other symptoms, insensibly conducted the patients to emaciation and death. Yvaren speaks of intermittent fever caused by the poison. (Metam. de la Syph, p. 173.) John Hunter (Treatise on Ven. Dis., p. 530) says that fever, insomnia, and headache, are common in the secondary period of syphilis. The fever is described as at first resembling rheumatic, and then hectic, fever. Swediaur (Traité de Mal. Ven.) speaks of authors who have described intermittent syphilitic fever. Guntz (Schmidt's Jahrb. f. gesam. Med. t. C. xx.) speaks of the precursory fever of the secondary period, and shows by thermometrical observations that it is continuous and remittent. The syphilitic fever of the secondary period commences frequently by headache, or sensation of cold, shivering, &c. The pulse becomes raised, and there is malaise. Disorders of the digestive organs are common in ordinary fevers, and the appetite falls off; but in syphilitic fever the tongue remains clean, the appetite is rarely lessened, and often becomes ravenous, as before remarked. The repetition of shivering fits, with local or general sweats, are frequent in the course of the fever; headache, periosteal pains, myalgia and neuralgia, with algidity of the surface of the body, and loss of sensibility to heat, pain, and common sensation, are frequently met with. The fever is irregular in its evolution, and inconstant in its duration. Fournier remarks (Lectures, in the press) that syphilitic fever is observed in three forms, intermittent, remittent (or continuous with exacerbations), and capricious. The intermittent form is the commonest, and sometimes simulates to a great degree the paludal fever in its regularity, recurring usually once (nightly) every twenty-four hours. The attacks exhibit shivering, heat, and sweating, and usually appear in the evening; and the three stages take about twelve hours to be completed. Insomnia, malaise, and weariness, with

great thirst, accompany these attacks. The spleen is not enlarged, however; but in other respects, the attack might easily be taken for one of paludal intermittent fever. Quinine is useless in such cases. Intermittent syphilitic fever is almost always of quotidian type, vesperine, or nocturnal. In the second form of syphilitic fever, that which is continuous with exacerbations, the attacks come on irregularly, and the duration of the attacks is very variable. This form is less common than the intermittent form, and is often accompanied by great asthenia, torpor, and even stupor, so as occasionally to simulate typhoid fever. Fournier has given it a name, *typhose syphilitique*. The author has quite recently had a lady under his care with similar symptoms of syphilitic fever. The pulse may rise to 136, and the temperature be as high as 41·7 C. It is seen in its intensity almost solely in women. Besides these two forms of syphilitic fever, there is a third, in which it is very difficult to define the character of the febrile attack. The fever may be at first intermittent, and afterwards continuous, to return again to the intermittent form. In some cases of secondary syphilis in women, there is true cerebral asthenia. The patients complain of inability to read, work, or make any intellectual effort. Guntz, in his memoir says that the fever usually appears about sixty-five days after the patient has contracted the original contagion; but the fever may occur at very various epochs in the history of the disease, although it is far more rarely seen as the disease gets older. Fever occurs, according to A. Fournier, in one-third of the cases of syphilis entering the wards of the Hôpital de Lourcine. The termination appears to be uniformly favourable, and no cases of death from syphilitic fever are on record. Mercury and iodide of potassium are the two remedies which, according to A. Fournier, we must employ in its treatment. As to diagnosis, it is distinguished from marsh fever, partly by the non-efficacity of quinine, and partly by the fact that the attacks are not quite so regular in syphilitic fever as in paludal fever. It may, in some instances, be readily mistaken for commencing tuberculosis; and the author has noticed some cases in which this mistake has been made. Typhoid fever is distinguished from syphilitic fever, by the dryness and sordes of the tongue and teeth, the delirium, inappetence, gurgling in the iliac fossa, and râles in the thorax. The fever is often seen in persons who have undergone a mercurial treatment, and M. Diday (Histoire Nat. de la Syph.) considers that iron and iodine are the only two fit remedies for this symptom. A. Fournier gives mercury, in

combination with iodide of potassium, in fevers of the secondary period, and sometimes iodine alone; he thinks that mercury is less efficacious in such fevers than in other diseases of that period.

In a clinical lecture listened to by the author, in August 1871, at the Lourcine Hospital, Dr. A. Fournier insisted upon the way in which secondary syphilis acts upon all the functions of the body, and not only upon the skin and mucous membranes. First of all, the nervous system is often greatly affected, in women especially. Hemiplegia and paralyses of the face and motores oculi are far from rare in the secondary epoch. Hysterical and epileptic women have their attacks increased when poisoned by syphilis, which, indeed, often gives rise of itself to both of these diseases. As to algidity of the extremities, Ulrich von Hutten remarked this effect of the disease, in his own person, in the sixteenth century; the hand is sometimes "as cold as ice." With regard to the function of respiration, it is not often affected in secondary syphilis; but some patients complain of dyspnœa. With regard to the circulatory system, palpitation of the heart is often observed, and great irregularity of the pulse during secondary eruptions, as is well shown by sphygmographic diagrams. The nutrition is affected in very many cases. Colic and diarrhœa are very common. The diarrhœa often resists all ordinary astringent remedies, and yields only to specific treatment. Jaundice is sometimes seen. Loss of weight is common, and, in tertiary cases, marasmus sometimes supervenes. On the uterine functions, we find that syphilis acts by causing very frequent amenorrhœa in the secondary period, which lasts for months, making some patients suppose themselves pregnant, when that is not the case. Depaul speaks of the disease causing sterility; but the experience of the Lourcine Hospital is opposed to this. Syphilis, however, causes abortions, and dead or premature births, very frequently indeed in the secondary period; and a student in the Lourcine found that, of five pregnant women entering that hospital with secondary eruptions, four aborted or had premature labours. Dr. Fournier mentioned a case, where a woman had seven pregnancies followed by syphilitic children. In all cases where women abort frequently, both parents (says Fournier) should be examined carefully, and mercury or iodide of potassium given for some lengthened period, when they will probably have healthy children in very many instances.

CHAPTER VI.

TREATMENT OF SYPHILIS.

The course of syphilis is greatly influenced by certain drugs ; and although, in many other diseases, a great number of physicians have become more or less votaries of what is styled *expectation*, it has been found that syphilis is a notable exception in many cases to the wholesome rule, which enjoins us to " Keep up the strength, whilst repairs are going on." Few persons of any clinical experience in the treatment of syphilis, doubt for a moment the value of iodide of potassium in the treatment of tertiary ulcerations ; but there is quite a chaos of opinions upon the question of whether mercury is useful in such cases, or in what doses it should be administered; or, indeed, whether mercury does not do on the whole, more harm than good to syphilitic patients. The author himself has for many years treated all cases of syphilis he has met with, by means of the iodide of potassium, combined with tincture of iodine, and has in no instance employed any form of mercury ; but he is fully conscious of the amount of serious conviction concerning the utility of the latter drug, in the minds of some of the ablest practitioners of the day, in all countries. It will, then, be his duty in this chapter, to examine into the evidence on both sides of the important question, as to the treatment of syphilis, with or without mercury.

In former days, mercury was much more used by physicians in all kinds of diseases, than it is in London at present. It was given formerly in all acute inflammations of the various organs of the body. In Paris it has, for some years, been chiefly used in iritis and syphilis ; but, in Dublin, a few years ago, it was much used by men of great experience in almost every kind of disease. Samuel Cooper tells us that, " when apprentice at Saint Bartholomew's Hospital, most of the venereal patients of that establishment were seen with their ulcerated tongues hanging out of their mouths, their fauces prodigiously swelled, and the saliva flowing out in

streams." Ramsbotham is quoted by Copland in his Dictionary, p. 413, as mentioning a case, where fifteen grains of blue pill, five grains each night, caused fatal salivation. Christison says, that "two drachms of mercurial ointment applied externally, caused violent ptyalism and death in four days" Even the use of strong solution of corrosive sublimate in ringworm has lately proved fatal. The author has seen one or two cases somewhat similar to these in days gone by. And yet, M. Victor De Méric remarks, in his classical work on syphilis, "I have given the iodide of mercury in hundreds of cases, in the Royal Free and German Hospitals, to out-patients who do not take especial care of themselves, and I do not recollect any case where the metal has caused any unpleasant symptoms." He admits, however, at the Admiralty Commission that such patients were not unfrequently salivated. Strangulated hernia used to be treated after operation by doses of calomel. Does the practice still remain? Even ovariotomists leave their cases entirely without calomel after operation; so probably it is seldom used in hernia.

The treatment of iritis is deemed by Mr. Jonathan Hutchinson and others to demand mercury; but the cases cited by Hugh Carmichael of Dublin, Dr. H. Williams of Boston, and, quite recently, by the late Mr. Zachariah Laurence, and by Mr. G. G. Gascoyen, seem to throw doubts on this point. The facts related by Mr. H. Carmichael, clearly proved that many cases of syphilitic iritis recovered most completely under drachm doses of turpentine in almond emulsion. Dr. Hughes Bennett, too, says, ("Principles of Medicine.") "As to mercurials, the confident belief in their power of causing absorption of lymph by operating on the blood, is not only opposed to sound theory, as formerly explained with regard to blood-letting, but is not supported by that experience which has been so confidently appealed to in its favour. They have been most praised in the treatment of serous membranes and iritis. But more careful observation has demonstrated that the moment these diseases are treated without mercury, they are uninfluenced (except in certain cases for the worse) by the drug. Of sixty-four cases of iritis of every degree of severity, treated without mercury by Dr. H. Williams of Boston, the results, with four exceptions, which were neglected at the commencement, were good." The late Mr. J. Z. Laurence, in an opening address to the North London Medical Society, in 1863, p. 9, says:—"The second group of ophthalmias embraces the inflammations of the deeper structures of the eye. They are, as a rule, of a much more grave and dangerous character

than those of the preceding group. These deep-seated inflammations are commonly treated by depletion, counter-irritation, and mercury. I treat them by the internal administration of opium, in combination with sedative local applications. I have published in the 'Edinburgh Medical Journal,' (Dec. 1862,) a complete memoir on the subject, exhibiting the histories of twenty-nine cases thus treated, twenty-three of which were cured." Mr. G. G. Gascoyen, although adhering to the use of mercury in syphilis, is opposed to its use in syphilitic iritis in most cases, as is shown by a paper read by him before the Royal Medico-Chirurgical Society of London in 1870. The learned and amiable Professor Bœck of Christiania treats all of his cases of syphilitic iritis with atropine locally, and Dr. Owre of the same city does the same. The author has usually found good results from this treatment, conjoined with ten-grain doses of iodide of potassium. Adhesions, however, seem to follow after any kind of treatment, in bad cases of syphilitic iritis; especially in elderly patients, and here the prognosis is often very bad.

It must be mentioned, that Mr. Critchett is in favour of the use of mercury in such inflammations of the eye, in company with Mr. Jonathan Hutchinson; and as the author entertains the profoundest esteem for both of these most deservedly eminent men, he is most anxious to quote their opinion here. In his article on Syphilis, in Reynolds' "System of Medicine," before alluded to, Mr. Hutchinson says, "If the iritis be allowed to proceed unchecked, it will in all probability end in obliteration of the pupil, either partial, or complete. It will effect but little to use atropine, unless we use mercury also, for in many cases, during the acute stage of the inflammation, the pupil can scarcely be made to dilate, until the lymph effused into the iris is in part absorbed. The longer the lymph is allowed to remain, the longer the inflammatory process is allowed to continue unchecked, the greater will be the risk of disorganisation of the structures implicated. These remarks apply with greater force to syphilitic retinitis than to iritis. That it is the bounden duty of the practitioner to administer specific remedies in these diseases, no one who has considered the facts, can, I think, doubt." Mr. John Couper of London has kindly informed the author in conversation, that his treatment in all bad cases of syphilitic iritis, is by means of inunction in the axilla of mercurial ointment of about the size of a hazel nut, every night, for some weeks; so as, not to salivate, but to make the gums a

little sore. The atropine drop, four grains to the ounce, is dropped into the eye three or four times a day. It is only very mild cases of iritis that he treats with iodide of potassium; when there are only one or two nodules of lymph on the iris. In old persons, where the pupil is very irregular, the prognosis is bad; but in young persons it is usually good. Where adhesions are very extensive, he keeps up the atropine for several months, and thus breaks down the adhesions in time. "It is not uncommon to see the retina, (says Mr. Hutchinson,) in a case of severe retinitis, become almost clear after a fortnight's mercurial treatment, with corresponding benefit to the patient's vision. It is, on the other hand, very common to see the disease remain unchanged for several months, if mercurial treatment be not adopted." After these remarks, he cites a case, in which a patient consulted Mr. Critchett, having undergone merely tonic treatment for some time. "Mr. Critchett (the patient said) assured me that the fear of mercury was all nonsense, and that the only chance for my sight was at once to go home, keep myself in a warm room, and take mercury till the mouth was sore. This I determined to do, and the result was, that in the course of a week, I could see very much better, and subsequently regained almost perfect sight." After these parallel pieces of evidence, it is to be hoped that the question may ere long meet with the careful consideration it deserves. The same praise of mercury, be it remembered, used to be in vogue in pericarditis; but Gairdner, Habershon, and Hughes Bennett's writings have put it *out of practice* in this, as well as in peritonitis, pleurisy, and acute hydrocephalus. How difficult—is it not?—to arrive at sound conclusion, with regard to the action of internal remedies, with the very best intentions.

TREATMENT OF SYPHILIS BEFORE 1812.

Celsus, in book vi. chap. xiii., speaks of ulcers found behind the foreskin, in cases of phymosis; and treats them, after circumcision, with lotions containing wine, turpentine, &c. He also advises the use of the actual cautery in phagedæna; but, as we are not convinced that true syphilis existed in those days, it is hardly worth quoting farther from that great author. Dr. Meryon, in his "History of Medicine," says that, in some parts of Spain, where mercury was used in the fluxing of metals, it was discovered by chance that mercury was a specific for syphilis. It was used externally, as early as 1497; but Paracelsus first gave it internally,

about the year 1570, as far as the author is able to judge. In 1754, Astruc, then physician to the King of France, wrote a work, in which we hear of Ulrich Von Hutten's case, who had been salivated eleven times for syphilis, and thus describes the process. "He was hardly anointed, before he began to languish amazingly; and so great was the strength of the ointment, that it forced into the stomach whatever portion of the disease lay in the upper part of the body, in so violent a manner, as to make the teeth drop out. The jaws, tongue, and palate were all of them ulcerated, and the gums swelled. The whole apartment stank, and the mode of cure was so hard to suffer, that a great many chose rather to die than submit to it. After all this, there was hardly one in a hundred cured by it." Baron Von Swieten wrote his aphorisms, and gave the recipe for his famous solution of bichloride of mercury in alcohol, still used in Paris, in the 18th century. Hunter, in 1786, wrote his celebrated treatise, "On the Venereal Disease." In page 357, he says, "Mercury in the lues venerea, as in the chancre, is the real specific; and hardly anything else is to be depended upon. If there be such a thing as a specific, mercury is one for the venereal disease, in two of its forms." Benjamin Bell, in 1793, writes, page 228, "When it is wanted to raise a salivation suddenly, or to throw mercury into the system quickly, fumigation is perhaps the surest method of doing it; for with the fumes of mercury, salivation is sometimes excited in the constitution in the course of a few hours." He adds, "It is a prevailing opinion, that mercury is apt to occasion abortion; it is therefore seldom given in pregnancy." This tallies with Dr. Bœck's observation, that if mercury is given to syphilitic women, they are apt to have syphilitic children and abortions for a much longer time than if left alone. Mr. James Lane, and also Mr. Berkeley Hill, however, strenuously contend for this practice in pregnant women. Mr. Pearson of London, writing in 1800, shows how completely practitioners had at that epoch come to forget, that syphilis could ever get well of its own accord. In page 47, he says, "If credence may be given to men of eminence in the profession, this rigorous course of discipline is not necessary; for, according to Thierry de Héry, M. de Blegny, &c., the disease may terminate by a natural crisis, and is susceptible of a natural cure. The German peasant, the Russian boor, the temperate Hindoo, tho wretched African enchained in our West Indies, will no doubt furnish us with abundant instances, where the requisites of exposure of the body to the extremes of heat and cold, of scanty allowance

and excessive fatigue, may all be found in full measure. Yet, no proof can be brought that the powers of the constitution, aided by this sort of discipline, did ever effect the cure of the disease without the intervention of medical assistance." Mr. Pearson adds that "when mercury is under the direction of an unskilled man, the complaint will be generally exasperated by it, and rendered more intractable than if no mercury had been given." In page 130, he says that, after his appointment to the Lock Hospital, for two or three years, he noticed almost every year, one or two deaths caused by mercury acting as a poison.

EVIDENCE AGAINST MERCURY IN SYPHILIS, 1812-40.

One of the most fortunate results of the British campaign in the Peninsula was the discovery made by the scientific part of the army, that syphilis (chiefly primary venereal ulcers) was treated successfully in Portugal by simple hygiene and low diet. Indeed, it seems to the author to be one of the most important discoveries in the practice of modern times, after that of vaccination. For before that time, thousands doubtless died after long and protracted suffering, caused by the very mercury which was given as a remedy. Dr. Fergusson, who was residing in Portugal, wrote a letter home, dated Evora, April 30th, 1812, which letter was read before a meeting of the Medico-Chirurgical Society of London, June 9th, 1812. He thus commences: "Syphilis has excited much interest and altercation in this country on the part of all British medical observers, no less for its dreadful ravages among their own countrymen, than for its comparatively milder phenomena among the inhabitants of this country. In the British army it is probable that more men have sustained the most melancholy of all mutilations during the four years that it has been in Portugal, through this disease, than the registers of all the hospitals in England could produce for the last century; while venereal ulceration has not only been more intractable to the operation of mercury than under similar circumstances at home, but the constitution, while strongly under the influence of the remedy, has become afflicted with the secondary symptoms in a proportion that could not have been expected. With the natives, on the contrary, the disease is very mild; curable, for the most part, by topical treatment alone, or wearing itself out, when received into the constitution, after running a certain course (not always a

destructive one) without the use of any adequate mercurial treatment. I have now been upwards of ten years at the head of their hospital department, and can declare, that it never occurred to me, amongst all the venereal patients whom in that time I have seen pass through the hospitals, to meet a single one under the influence of mercury, excepting those cases wherein I have personally superintended its administration. They go out cured by topical remedies alone, and I have lived long enough among them to ascertain that their return to hospital, under such circumstance, for secondary symptoms, is far from a universal, or even a frequent occurrence." In page 6, he says: "That the disease is now curable here in its first stages without either mercury or sarsaparilla is unquestionable, as well from the thousands of actual cases, as from the certainty that the use of mercury, when pushed to the extent that can at all constitute it a remedy in any state, is actually unknown to the native practitioners, who in that point of view religiously abstain from its use, considering it, with horror, as one of the poisons which foreigners madly wield; and, therefore, I would infer that the disease is exhausted, and has expended much of its virulence in this country, as much from its easy cure, as from the analogy of the natural small-pox." Although not in chronological order, it is instructive to quote the opinions of Dr. Fergusson after a lapse of thirty-four years. During the interval, from 1812 to 1846, the experiments of Rose, Guthrie, Hennen, Fricke, Desruelles, &c., had appeared, and extended the knowledge of the non-necessity for any specific treatment for ulceration of the organs of generation, and many of their sequelæ, to all parts of Europe. The following extracts from Dr. Fergusson's "Notes and Recollections of a Professional Life," (London, 1846,) are a warning to all of us, not to be too dogmatic in our assertion as to the certainty of any method of treating disease being the best possible. In page 117, he says: "Until our experience in the Peninsular wars, there had been but one opinion among us of its utter incurability but by mercury; and, if by chance, the disease got well without it, we had as little hesitation in declaring that it could not possibly have been syphilis, but some other disease putting on that form. On my appointment to be Chief of the Medical Department of the Portuguese Army, in 1810, I found that the native faculty never used mercury for primary symptoms, and very little, if any, for secondary ones, and they obstinately contended for the right and propriety of their conduct. Such infatuation, as I then thought it,

was not to be reasoned with. I applied to the Commander-in-Chief, and obtained the strongest general order that could be penned, ordering the use of mercury in every stage of the venereal disease. Still I was beat. Whenever I could not personally superintend, the remedy was neglected; if present, the mercury was mingled with sulphur; and when I insisted upon seeing whether it had been rubbed in, I was prosented with a skin as black as an Æthiop's. At first the dislike and horror for the remedy was so great, that they would rush from the room when it was applied, and wash it off with soap and water. In fact, I saw that I was playing a losing game, where I could not help myself; yet, at the same time, I could not help acknowledging that the grave consequences I apprehended must have ensued from their preposterous conduct did not follow; and that our soldiers who were mercurialized, I may say, to extremity, often suffered them in a lamentable way. But I did not at first open my eyes to the whole truth; and, within two years afterwards, first Mr. Rose and then Mr. Guthrie ventured upon bolder views, and published to the world the feasibility, propriety, and safety of treating British soldiers in the same manner as the Portuguese. I confess that nothing in the practice of physic ever staggered me more than the discovery that the creed of ages should be found utterly baseless; that the wisest amongst us should have in all the intermediate time been destroying, instead of saving, their patients, by murderous and unnecessary doses of mercury, was enough to shake the firmest faith in physic, and to prove that what might seem the best established principles of medicine were no more than the delusions of the passing day. Were I now to make a scale of the applicability of mercury, I would say that the tithe of what formerly used to be administered is the proper initiatory quantity in any case, until it be ascertained whether it suits the patient's constitution or not; that, again, a tithe of that tithe, or a centime, is the allowable preliminary dose in secondary symptoms; for, wonderful to say, those which were once believed to be incradicable in less than a lifetime of mercury, are now found to be cured with far greater facility than the primary symptoms." In page 122, he says: "I shall conclude this part of my subject, at present, by stating the incontrovertible fact, that the British army, at this moment, contains thousands in perfect health, and has contained thousands more, who have been perfectly cured of every stage or state of syphilitic disorder, without ever having taken a particle of mercury.

The steps which led to this important discovery may, before concluding, still be worthy of some further remarks. When the British army landed in Portugal, the soldiers were all of the native kind and habit; sanguineous, plethoric, highly fed for soldiers, and addicted to the use of alcohol. The climate at the autumnal season of the year was hot, and the campaign, before reaching the capital, had been active. Under these circumstances, intercourse with the common women of the country produced the usual consequences of syphilitic disease, for which at that time we knew but of one remedy, *intus et in cute, ab ovo usque ad mala;* and afterwards, as long as the patient remained above ground, no matter what mutilations and exfoliations he might have suffered, mercury was the sole panacea. With such subjects, more especially at the beginning of the disease, before being leeched and depleted, it might have been foreseen that phagedæna would assume the reins, while mercury gave the spur. Our hospitals exhibited instances of the most melancholy mutilations; and even amongst the officers these were occasionally seen. The Portuguese, meanwhile, regarded the treatment with horror and astonishment; with them the disease was ordinarily of chronic and mild character. It was a misfortune of which they thought no more shame than they would of scrofula or cancer, and they sought no concealment. This led to my first publication in the "Medico-Chirurgical Transactions." Mercury in excess and long continued had even led to exfoliation of the facial bones, and for these exfoliations we gave more mercury. Now we wonder at the number of victims, as we then thought, of the disease, but in fact of the remedy. The Portuguese, I may almost say, had no phagedæna. I cannot call to mind a single instance similar to ours, with the exception of a camp follower, but he was as highly fed and sanguineous as any of his English fellow-servants."

In a work entitled "Observations on the Treatment of Syphilis, with several cases in which a Cure was effected without the use of Mercury," by Thomas Rose, A.M., Baliol College, Oxon., Surgeon to the Coldstream Guards, read at the Medico-Chirurgical Society of London, January, 1817, Mr. Rose says, ("Transactions," vol. viii, page 337,) "Lastly, I have tried the same system in the Coldstream regiment of Guards, during the last year and three-quarters, and have constantly succeeded in curing all the ulcers on the parts of generation which I have met with, with the constitutional disorders to which they gave rise, without the exhibition of

mercury." In page 363 : "All ideas of specific remedies were entirely laid aside. The patients were usually confined to their beds, and such local applications were employed as the appearance of the sores seemed to indicate." In page 422, he says, "Without including many slighter ulcerations, and those of which I lost sight immediately after their cures, I have, during the last two years, treated on the same system more than one hundred and twenty cases, where I have been able to ascertain that my patients were in perfect health for many months afterwards, or where they have returned with secondary symptoms, similar to those already described. Upon an average, one out of every three of the sores thus treated, was followed by some one form or other of constitutional symptoms; this was, in most cases, mild, and sometimes it would have escaped notice if it had not been carefully sought for. Mr. Abernethy inquired, he tells us, of the best surgeons in London, whether constitutional symptoms of syphilis do ever spontaneously amend. No one decidedly replied in the affirmative." Mr. Berkeley Hill, in his classical work on syphilis, mentions that Mr. Rose, and also Dr. J. Thomson, in after years returned to the use of mercury in small doses in true syphilis, from the evidence of Mr. Cutler, before the Venereal Diseases Committee, and two other authorities. Would they have done so, had iodide of potassium been known of at that time?

In "Observations on the Treatment of the Venereal Disease without Mercury," by G. J. Guthrie, Esq., read at the Medico-Chirurgical Society, London, January, 1817, the author remarks, "On the continent, in general little attention is paid to the appearance of primary sores; but this does not lead in general, in Italy, or in the north of Europe, to the exhibition of mercury or any other specific; and Mr. Cullerier, the first surgeon in the Venereal Hospital, in Paris, demonstrates the possibility that every kind of ulcer is curable by common means." By this time many persons had begun to perceive, what has lately been elaborated by M. Ricord, that some forms of ulcers were more frequently followed by secondary symptoms than others. In page 556, Mr. Guthrie remarks, "In consequence of those opinions, it became desirable to ascertain, at an early period, whether an ulcer was a chancre or not; and many surgeons prided themselves on their peculiar talent, in distinguishing these ulcers which absolutely require the use of mercury for their cure, from those which did not; but the value of this prescience will be more duly estimated, now that it

has been ascertained that every sore, of whatever description it may be, will heal without its use, provided sufficient time be granted, the constitution be good, the patient regular in his method of living, and that attention be paid to cleanliness and simple dressing, and to keep the patient in a state of quietude. During the last eighteen months, in the York Hospital, Chelsea, Mr. Dease, Dr. Arthur, Dr. Gordon, and myself, have been in the habit of treating all cases of ulcers on the penis, of whatever form or appearance, by simple mild means; that is, by dry lint, or by ointments or lotions, for the most part not containing mercury, in order to obviate the objection that might be made to the application of it in any form; and of nearly one hundred cases, which have been treated in this manner, all the ulcers healed without the use of mercury." Mr. Guthrie points out, that it was in reality the habits of the soldiery and the mercury they took, which gave rise to the phagedæna which they suffered from in Portugal. Mr. Guthrie, page 576, says, "Secondary symptoms (and I exclude trifling pains, eruptions and sore throat, that have disappeared in a few days) have seldom followed the cure of these ulcers without mercury; and have, upon the whole, more frequently followed the raised ulcer of the prepuce, than the true characteristic chancre of the gland. The secondary symptoms in the cases alluded to, amounting to one-tenth of the whole, which were treated on the antiphlogistic plan, have hitherto been nearly confined to the first order of parts; that is, the bones have in only two cases been affected; but they have been equally cured without mercury. As great a length of time has elapsed in many of the cases as is considered satisfactory when mercury has been used, namely, six to eighteen months."

In the "Edinburgh Medical and Surgical Journal," January, 1818, appeared, "Observations on the Treatment of Syphilis, by John Thomson, M.D., Professor of Surgery to the Royal College of Surgeons of Edinburgh, and Surgeon to the Forces." John Thomson was, it appears, appointed in 1816 to the care of the depôt in Edinburgh. "In this hospital," he says, "open to the inspection of all the medical military officers attending the University, I have, since that period, carefully abstained from the use of mercury, not only in treatment of secondary, but also in that of the primary symptoms of syphilis; and have found that chancres and buboes have in every instance disappeared under an antiphlogistic regimen, rest in the horizontal position, and mild local applications, as

speedily as I have ever seen them disappear in similar cases where mercury was employed. Bubo has occurred, sometimes suppurating, and sometimes disappearing by resolution, in about a quarter of those affected with chancre; but in none was there any tendency to gangrene, as when mercury was used. Of the cases which I have seen, the number in which constitutional symptoms have supervened, does not exceed one in ten; and the only forms of these symptoms which have presented themselves, are ulcerations of the throat and cutaneous eruptions, sometimes accompanied by inflammation of both eyes. The ulcerations of the throat have been few in number, and generally accompanied with cutaneous eruption. They have had an aphthous appearance, and sometimes aphthæ inside of the mouth, enlarged tonsils, and swelled lymphatics of the neck. The cutaneous affections which have occurred, have been, in several cases, a reddish mottled efflorescence of the skin, resembling roseola; in others, papular, pustular, scaly, or tubercular eruptions. These secondary eruptions have usually occurred in cases where the primary sores had been long in healing, and when they had left behind them indurated cicatrices. The time at which they generally occurred has varied from four to twelve weeks after the appearance of the primary ulcer. The affections of the throat have been slight, in comparison with those which usually take place in venereal cases, after the use of mercury. The cutaneous eruptions have been chronic in character, and have all, as well as the sore throats and inflammations of the eyes, gradually, though sometimes slowly, disappeared, without the use of mercury, and without seeming to have left any injurious effects behind them. I am inclined to believe, that, if mercury had been employed, the cutaneous affections in several of the cases might have been cured in a shorter period of time; but whether, in accelerating the cure of the cutaneous eruption, that remedy might not have excited other constitutional affections, is a point which future experience alone can determine." As before stated, Dr. Thomson is said to have returned to the use of mercury.

In the year 1818, Dr. Hennen, Surgeon of the Forces, read communications contained in the April and July numbers of the "Edinburgh Medical and Surgical Journal," 1818. In page 202, he says, "That these sores, and also the species which Mr. J. Hunter has designated as the true syphilitic sore, heal without the employment of any other means than rest, abstinence, cleanliness, &c., is perfectly demonstrable; and is daily to be seen in the wards

of the Castle and at Queensbury House, appropriated to such cases. That ulcerations in the throat, cutaneous eruptions, and a combination of both, coupled in some cases with iritis, have disappeared, under the same treatment, is equally certain." In 1820, in his work on "Military Surgery," he makes some further remarks. Speaking of the injurious effects of mercury upon many diseased conditions of the body, he says, "But the most troublesome of all its effects is the phagedæna, which it often induces, both in chancres and open buboes. In the throat most severe ulcerations are effected by it." Dr. Hennen gives a table of the cases treated and the results obtained, from which it seems, that of the four hundred and seven cases treated, iritis occurred only in one; exostosis in one; secondary symptoms in forty-six, some of them slight, and all healing in from ten days up to eighty days. This tallies with the experience of Dr. Paulet of the Val-de-Grâce Hospital of Paris among healthy troops. (Oral communication.) Dr. Hennen gives the average time for the cure of primaries, without bubo, as twenty-one days; with bubo, forty-five days; and for secondary symptoms, from twenty-eight to forty-five days; and adds, that the appearances most often observed in non-mercurial treatment were the return of the primary sore, and repeated attacks of the eruption. It would appear that Dr. Hamilton, at that time professor of midwifery in Edinburgh, made an objection to the non-mercurial treatment of syphilis, that it would greatly increase the liability to infantile syphilis; an argument which Hennen meets by observing that, of thirteen children, born of parents treated without mercury, eleven were born alive; none of these had since their birth died, or manifested any suspicious symptoms, although some of them were then in their third year. Were many of the mothers syphilitic? In page 567, he says, "But, notwithstanding Dr. Hamilton's opinions to the contrary, so strongly expressed in his work, we have reason to believe that children have recovered from the disease, not merely without mercury, but spontaneously, and without any remedy whatever. And Mahon, in his 'Œuvres Posthumes,' page 416, says, 'On ne peut nier, cependant, qu'il ne puisse arriver, que les symptômes vénériens disparaissent chez les enfans nouveau nés, à qui on n'a fait aucun remède. J'en ai eu plusieurs exemples.'" Dr. Hennen concludes by remarking, "While the great mass of medical men believed that syphilis of adults was absolutely incurable without mercury, it was natural for them to apply the same opinion to the disease, or the suspected appearance, in infants. But it is to be hoped that, in the present

state of our knowledge of the natural history of syphilis, imperfect though it be, we will not withhold from the rising generation the chance of these benefits, which have proved serviceable to those of advanced years."

In a "Memoire sur le Traitement sans Mercure, employé à l'Hôpital Militaire d'Instruction du Val-de-Grâce, par M. Desruelles, Chirurgien Aide-Major, Chargé de la Direction des Services des Vénériéns à l'Hôpital du Val-de-Grâce," (Paris, 1828,) in the "Journal des Progrès des Sciences Medicales," it appears that M. Desruelles was entrusted, in the year 1825, with the charge of the venereal patients at the military hospital of the Val-de-Grâce. "There he collected upwards of one thousand five hundred cases, of which the results, which cannot be suitably developed, excepting in a large work, are now given in a short treatise. M. Desruelles," says the writer, "had great confidence in the employment of mercury. This confidence was only shaken very slowly, by perceiving the accidents and returns of the disease which accompanied the mercurial treatment. This consideration had struck him in 1819, when entrusted with the care of venereal patients at the Hôpital de la Garde. He was not long in perceiving that simple dressings, and, in the greater number of cases, scrupulous cleanliness, advantageously replaced the ointments, the powders, and the irritating lotions, and that the employment of simple antiphlogistics, in moderation, hastened much more than the means hitherto adopted, the cure of venereal symptoms. At the same time, it was unconsciously, and driven by the evidence of facts, that he arrived at banishing the drug from his treatment, which had formerly entirely constituted it."

"It is not without interest to note how, and by what means, M. Desruelles has acquired the conviction that he endeavours to make known. From the moment when he ceased to administer the medicine so long in use, all the symptoms diminished in gravity, and disappeared with the greatest promptitude. He ceased to see the secondary accidents, which were so frequent a short time before. It became evident that they were due, for the most part of the time, to the medicine which was employed to cure them; and, in fact, the persons who were affected with caries of the bones, with exostosis, with periostitis, with pains, with skin diseases, ulcers on the tongue, velum palati, tonsils, and pharynx, with serpiginous ulcers, or suppurating pustules, had taken considerable doses of mercury, by friction, or internally. In the majority, these symptoms were

aggravated every time that the mercurial treatment was given. A crowd of varieties, well described by authors, vanished under a more simple treatment; the progress of the disease was more uniform. The numerous variety of ulcerations, which used to be remarked, were the results of the means of cure. It became evident that this product was artificial, during the moment of incertitude and of comparative attempts in the second period. In the same ulcer we could obtain all the forms which constituted the species which have been described. If we violently irritate an ulcer, its base will become indurated, its edges callous, its bottom excavated and grey. It will be easier to obtain the product if we, in addition, irritate the internal organs by stimulating medicines. Treat, on the contrary, the ulcer by lotions; or apply baths and leeches to the surface; give the patient no medicine; confine him to a light, vegetable diet; you will shortly see the ulcer change its appearance; its edges sink, its bottom clear up, and the greyish slough disappear. It is to mercury that we must attribute the tubercles, the irregularities, the livid colour, the serpiginous character of the sores. They are united, whitish, and on the level with the rest of the skin, when this drug is not administered. Some dogs were submitted to its effects, some by friction, and others by liquids. Among those which had mercury rubbed in, salivation was observed, as in man. Among all were found alterations which are commonly attributed to the venereal disease; the teeth were shaken and almost all loose, the gums ulcerated, the buccal mucous membrane, the velum palati covered with aphthæ, the pharynx red, the stomach more or loss diseased." In page 99, M. Desruelles explains that the non-mercurial treatment has long been in use in England; but it is far from there producing the good results we might expect from it, "because embarrassed by a crowd of useless complications." He then gives the treatment used at the Val-de-Grâce, and divides it into internal and external treatment. "Internal Treatment:—The use of rich soups, of meat, fish, and fermented liquors retarded the cure. Light soups, or milk, or fecula, with fresh eggs, &c., and with milk for a drink, and also sometimes for nourishment, such were the substances which constituted the diet up to the time when the symptoms begin to amend; after this time a more generous diet is allowed. Rest in bed is one of the principal means of cure, especially in winter. In this way the body remains always at the same temperature; the repose is complete, the local accidents are not liable to be rubbed, the external applications remain more con-

stantly *in situ*. Simple tepid baths, once or twice a week, are very often useful." In page 112, it appears that "Ulcers were not submitted to any dressing; they were merely covered with a rag dipped in an emollient decoction, whose effect was to free them from the action of the air, and prevent them from touching other healthy parts or other ulcers. If their base was swollen and tender, if the edges were hard and painful, some leeches applied to the interior, calmed the pain. Painful ulcers and open buboes, when the seat of irritation, ought to be covered with lint, dipped in a concentrated solution of opium, over which emollient fomentations were spread. 'It is easy to see,' says M. Desruelles, 'that the internal treatment is reduced to the greatest simplicity; the external treatment is not more complicated; and for the one, as for the other, the help of pharmacy is almost nil.'"

"M. Desruelles speaks with considerable certainty as to the non-probability of relapses. In page 104, he says: 'At the Val-de-Grâce, when mercury was employed, the mean duration of the treatment was two months; it is now (without mercury) twenty-six days.'" Such are the results of M. Desruelles, among the most decisive of the comparative experiments, that have been made upon the specific and non-specific modes of treatment. In a work, entitled "Cours de Pathologie," par F. Broussais, (Paris, 1831,) vol. iv. p. 243, the renowned author says, "For seven or eight years past, syphilitic patients have been treated at the Val-de-Grace without mercury. All the cures are not indeed radical, and some are followed by relapses. But those obtained by the exclusive mercurial treatment, used in the other hospitals, besides being less speedy, present still more relapses. The advantage then remains with the treatment without mercury."

In a later work by M. Desruelles, entitled, "Lettres Ecrites du Val-de-Grâce," (Paris, 1840-41,) he says: "A period of thirty years, more than three hundred thousand facts published in various works, the agreement of national and foreign practitioners who have tried the new method, the advantageous results which they have obtained, if they cannot yet convince you of the possibility of curing almost all venereal diseases, by the employment of a simple and hygienic method, will make you at least doubt the specificity of mercury, and the utility of its employment in all cases." In page 13, he speaks of the satisfactory results of Dr. Fricke's treatment. "Dr. Fricke has already published more than fifteen thousand cases. Experiments prove that the non-mercurial

treatment succeeds as well in cold as in warm climates." It appears that M. Desruelles' brother was also surgeon-in-chief to the Military Hospital at Rennes, and both of these gentlemen kept detailed accounts of their treatment from the year 1826 up to 1838. They thus collected twenty-five thousand cases in Rennes and Val-de-Grâce. They say, among other things, that "the mercurial treatment does not determine all the diseases which are attributed to it by the exclusive partizans of the simple treatment: but it accelerates their development, it increases their intensity, and gives them always a character of gravity, which the same affections lose when they succeed to the simple treatment."

The next witness is Dr. Fricko, whose name is well-known as a surgical authority, both in Germany and France. In a work, entitled "Annalen der Chirurgischen Abtheilung des Algemeinen Krankenhauses, in Hamburg, von E. G. Fricke, Doctor," (Hamburg, 1828,) there is a most detailed account of this gentleman's experiments. Dr. Graves has, in his "Clinical Medicine," volume II., translated a portion of the above work. The author may refer the reader to the original work, or to Dr. Graves' translation, if he desires fuller information upon the experiments of Dr. Fricke. "The treatment of syphilis in the Hamburg Hospital was divided into two epochs," says Fricke, "the mercurial period and the non-mercurial. The former period was, for males, eighteen and a half months, from January, 1824, to July, 1825; and for females, twenty-one months, from January, 1824, to October, 1825. The non-mercurial period lasted, with males, two years and five and a half months; and with females, two years and two months.

"*First Period; with Mercury.*—The forms of disease observed during this period may be seen in the annexed tables. On looking over them, a considerable difference will be seen between them and those of the second period; syphilis having exhibited itself in a much more malignant form in the first period. Nocturnal pains, caries of the nasal, palatine, and other bones, obstinate and extensive cutaneous eruptions, general lues, syphilitic cachexia, &c., were among the most ordinary phenomena; while in the second period they were of rare occurrence, and observed only in those who had been subjected to long and injurious courses of mercury. That which commenced with superficial ulcers of the genital organs, appeared as bubo, then as ulceration of the throat, next as extensive cutaneous eruptions, which often gave rise to ulceration, then harassed the patient with

nocturnal pains, carios of the bones of the face, and loss of the hair, until it terminated in syphilitic cachexia, general and incurable lues, consumption, emaciation, and dropsy. The mode of treatment employed during this first period was various; and regulated by the peculiarities of each individual. No undue predilection was shown for any particular form of mercury. The soluble mercury of Hahnemann was chiefly employed, in doses of a grain twice a day; in a number of cases calomel was used, in like doses. Corrosive sublimate was given in solution, three grains to eight ounces, generally with a little opium; one ounce was given three times a day. Thirty-three cases were treated with mercurial inunction. The latter, which was employed in thirteen women (in some persons twice), was had recourse to only in obstinate and extensive forms of the disease. When syphilis was inflammatory, an antiphlogistic regimen was at first employed. With regard to the duration of treatment, a remarkable difference will be perceived on inspecting the tables of both periods. I have taken an average of the number of days spent in hospital, as well by patients labouring under the different forms of syphilis, as by the general class, and added it to the tables. The relative proportion of this cannot always easily be stated, for no general law can be deduced from a few cases: but, in comparison, a difference in favour of the non-mercurial plan is readily perceived. With regard to the certainty of cure, so far as the mercurial treatment is concerned, we must say, with many of our unprejudiced colleagues, that we are convinced, by bitter experience, that syphilis very often returned in the secondary form, after the most cautious use of mercury, the most careful selection of the preparations, the strictest attention to diet, and all proper precautions. Of five hundred and seventy-three patients treated during the first period, one-third were attacked with secondary symptoms; all of them were treated with mercury for the primaries, although it is to be observed that the smallest portion of these had been under our care. Of those patients treated during the second period, who were attacked with secondary symptoms, by far the greater portion had at an earlier period and before admission, or whilst in hospital, used mercury for the cure of the disease. Many patients, in whom the disease was supposed to be eradicated, came back (particularly after the mercurial frictions) with caries of the bones of the face; some of them were afterwards cured without mercury, others are still under treatment. In the case of a young woman, who had frequently

used mercury, and who died twenty-two days after a protracted course of friction, on boiling some portions of the thigh bones and tibia for an hour in water, we found somewhat more than half a drachm of mercury.

"*Second Period; Treatment of Syphilis without Mercury.* — When this mode of treatment was introduced into our wards by Dr. Fricke, he at first submitted only a small number of patients to it, and chiefly selected those whose future prospects did not depend on their being cured in the speediest way. Having afterwards discovered, contrary to his expectations, that the disease was cured more rapidly in this way, and relapses much fewer and slighter, it was extended to all cases, with such modifications as experience suggested. At this time, February, 1828, after a trial of two years and a-half, and the successful treatment of more than a thousand patients, the results of this treatment have proved so favourable that there appears no reason for lightly abandoning it, or returning to the former plan of treatment. As already stated, patients are cured in a much shorter time than before, and leave the hospital with much healthier looks. All the unpleasant phenomena attendant on salivation no longer harass them. Formerly, notwithstanding the greatest attention and cleanliness, it was impossible to remove the foul smell from the venereal wards, or to keep the rooms or beds clean. The air was tainted with the offensive odour of salivation, or syphilitic caries, and filth was the the order of the day in all the wards occupied by patients under full salivation. At present, there is not a trace of this air in wards containing sixty, seventy, or sometimes a hundred patients; and the venereal department of the hospital rivals the other divisions in purity of the air and cleanliness. Syphilis seems, too, gradually to become more simple; at least it never appears in the same malignant forms as before, when little or no mercury has been used. As every medical man is allowed to visit the hospital, any one may convince himself of the truth of the statements. From the surveillance observed by the public over prostitutes, the attention and experience of the surgeons appointed by the Government to inspect them, and from the circumstance that such females come to our hospital for the relief of all diseases under which they may happen to labour, we are enabled to keep a strict control over their diseases. We endeavour to fulfil four conditions, viz.: cleanliness, rest, a strict diet, and (in a therapeutic point of view) an antiphlogistic plan of treatment. Cleanliness is of the greatest

importance towards a speedy and successful termination of the cure. Several patients were cured by the use of warm baths and ablutions. On the other hand, a neglect of these precautions has been the cause, either of the origin, or of the deterioration of many forms of the disease. On entering the hospital, all syphilitic patients, unless perfectly clean, are put into a warm bath. This operation requires to be looked after more carefully in men than in women; the latter being naturally more cleanly. Again, places on which ulcers, condylomata, and oxanthemata are seated, the glans and prepuce in gonorrhœa, and all carious bones, are cleansed from pus, mucus, and dirt, by frequently washing and sprinkling, rinsing and sponging with warm water. Pus is never allowed to collect on ulcers, or on the prepuce or glans in gonorrhœa. A most important rule is to prevent the excoriation, chancres, and condylomata from coming in contact with the healthy mucous surface or skin. To accomplish this, we put pieces of lint soaked in lead lotion, water, or black wash, into the folds, &c. Rest is necessary; particularly during the first period, and when the disease exhibits inflammatory characters. Hence all patients, when admitted, are confined to bed. With regard to diet, each patient was allowed at first four ounces of bread a day, three pints of gruel, and six spoonfulls of vegetables at noon. They were not allowed to drink beer, brandy, or water, but only thin gruel. As soon as the characteristic appearance of the ulcers began to vanish, or an improvement took place, the diet was gradually made more nutritious, according to the state of the constitution, and the wants of the patient, and when other matters went on favourably, meat was allowed. In the case of females, who seldom remained in hospital longer than three or four weeks (some not more than fourteen days), and who require less food than males, the first kind of diet was generally continued until the end of the cure: in males it was usually changed in a fortnight or three weeks. The appearance of those who were dismissed after a long stay in the hospital, was that of persons in perfect health, and, when strict diet had not been too long continued, not at all deficient in bodily strength. The therapeutic means employed were by no means complicated, and have been latterly rendered more simple."

In cases of secondary syphilis, particularly when the disease came on after the non-mercurial treatment, venesection was occasionally employed. The treatment commenced with a drachm of sulphate of magnesia to an ounce of water, *ter die*, so as to pro-

duce several stools, and afterwards one in the course of the day. The decoction of woods and nitric acid were also employed, in doses of half a drachm of nitric acid to twelve ounces of water; an ounce, three times a day. Soap baths, an ounce of soap to each bath were employed; also baths containing salt or mineral acids, or corrosive sublimate, or caustic potash. Many kinds of lotions were used for moistening the lint in the dressing of the sores. "With respect to the prognosis of chancres, we were always able to make it invariably good. None of the species extended to any remarkable degree, either in depth or in extent, when submitted to treatment. Even phagedænic chancres, which had in many cases committed great ravages before the patient's admission, were healed in such a manner, that a great portion of the devastation was supplied by healthy granulations. Hunterian chancres, so small as to measure but a line, were extremely slow in healing. So were ulcers on the frenum in males. Chancres made by art required as long a time for cure as Hunterian chancres of the same size. In the folds of the organs of generation, as for instance between the labia and nymphæ, the parts were separated and the angles cleaned and frequently washed and dressed with lint, and the dressing changed several times a day. If the ulcer suppurated freely the dressing was used oftener. If there was no advance in the healing process the lotion was changed, and lime water, aqua phagedænica nigra, &c., were applied, or recourse was had to ointments, which were used chiefly in cases where the chancres had become very small, and suppurated sparingly. An ointment composed of unguentum zinci half an ounce, balsam of Peru a drachm, potassa fusa a scruple, and called the black ointment, was found very useful when the ulcer was healed up to a certain point but would not scar. The ointment was allowed to remain unchanged for two or three days, until it was thrown off by the pus or by a scab. If the new skin exhibited any roughness or chafing, so as to threaten to break and become raw again, we used the ointment for several days in succession. Spongy ulcers were treated with a lotion called 'the green lotion;' composed of sulphate of copper half an ounce, alum half an ounce, to water, a pint. A very large deep phagedænic ulcer, with or without phymosis, required from three to four weeks, to eight weeks and sometimes more to heal. Ulcers on the posterior walls of the pharynx had always an ash-coloured base; altered the voice greatly; were in general covered with a greenish-yellow mucus, a portion of which flowed down when the mouth was open,

so as to render it a matter of difficulty to recogniso them. Ulcers of this kind always appeared after long mercurial courses, and healed very slowly, but with certainty.

"*Syphilitic Eruptions.*—Eruptions, at first discrete, of a bright liver colour, generally appeared after non-mercurial treatment, and disappeared completely and quickly. In cases where mercury had been taken, brown spots, first light, afterwards darker, appeared on the back. Large purple spots also, seated on the extremities and shoulders, raised above the surrounding skin, partly raw and partly covered with crusts, frequently turning into deep ulcers, were seen. This form of eruption was remarked only when large quantities of mercury had been used. . . . . The treatment of eruptions was extremely simple. It commenced always with ablutions with soap and warm water, and the purging mixture of Epsom salts. By such means alone the non-mercurial eruption was generally cured. When the eruptions were bad, then nitric acid baths, a fluid ounce to each bath, were used; and spots on the face were bathed with a lotion, containing one grain of the bichloride of mercury to an ounce of water. In some cases ulcers had to be blistered, and then treated with zinc ointment, after mercury had been employed. In general we considered the use of baths as the most valuable means of cure in syphilitic cases. Sometimes we are able to draw a tolerably fair conclusion from their influence upon the eruption, as to the quickness of its course, and sometimes we are able to effect a cure by its means alone." Six to eight baths were found sufficient in some cases. During 1827, the syphilitic patients took fourteen saline baths, thirty-eight zinc baths, one hundred and three warm baths, three hundred and two corrosive sublimate baths, three hundred and fourteen nitric acid baths, three hundred and thirty soap baths. In some cases cited by Dr. Fricke, death seems to have been rapidly caused by the use of inunction. The following condensed cases may illustrate this:—Anna C. was, in 1824-25, for fourteen months in hospital, for ulcers and scrofulous disposition. She used inunction, and left uncured. In February, 1827, had dropsy and died. Catherine S., age twenty-eight, entered July, 1824. Had taken much mercury. Was anointed with mercury, and died suddenly after the fifth inunction. Sophia B., age twenty-four. Had from May to August, 1824, taken mercury for primary sore. In October, 1825, was anointed. After twelve inunctions, died with universal dropsy. Christina M., age 21, June to November, 1827. Treated with mercury for syphilis, and died

five months after of a hectic fever. Dr. Fricke's just quoted observations appeared in 1828; and Dr. Graves, in a lecture delivered in Dublin in 1838, "Clinical Medicine," vol. ii., page 430, says, "As ten years have elapsed during which Dr. Fricke has continued to conduct the treatment in the Hamburg Hospital, I took the liberty of writing to him, for the purpose of ascertaining, whether subsequent experience had induced him to alter his views. His answer was, that instead of altering his views, experience had confirmed them." And in page 431, "Dr. Fricke has had no reason to abandon his new method of treatment; on the contrary, further experience has not only confirmed his previous observations in every instance, but also a series of cases, now amounting to several thousands, have forced upon him the conviction of superior efficacy of what has been called the antiphlogistic treatment." As before quoted, Dr. Desruelles mentions that Dr. Fricke had treated fifteen thousand cases.

Dr. Graves states that Dr. Strunz, in the "Berlin Medical Gazette," in an article entitled, "On the Non-Mercurial Treatment of Syphilis in the wards of the Charité, Berlin, observations made during twelve months," says:—"Among patients, some of them greatly neglected, Dr. Strunz has not met with a single case in which the non-mercurial plan has not succeeded, when instituted with a clear understanding of the peculiarity of the local disease. On the other hand, he has seen many out-patients treated with mercury for weeks and months together, without any advance being made toward the healing of the primary sores, or, in many instances, without any effect in arresting their destructive progress. In the Charité Hospital, not only primary sores have been treated for the last half year without mercury, but all forms of the disease. It might be objected to the non-mercurial treatment, that it does not afford any protection against the recurrence of the disease, that it does not ward off secondary symptoms. This may be true, but neither does mercury. If mercury, then, will not secure the patient from secondary symptoms, it is not unreasonable to have recourse to another plan, which at most, cannot be attended with more unpleasant results, and is free from the disadvantage of a double poison of the system. Both modes of treatment were followed at the Charité, and it was found that, under a similar management of the local affections, the patients who were treated with mercury could not be discharged for one, two, three, or four weeks after those treated without it." The late Dr. Von Bærensprung, in his

work on "Hereditary Syphilis," declares himself a non-mercurialist in his treatment of the disease in adults in the same Charité Hospital of Berlin.

In a work entitled, "Die Behandlung der Lustseuche ohne Quecksilber," von Dr. F. Oppenheim, (Hamburg, 1827,) the author gives an exhaustive catalogue of the numberless plants, minerals, &c., which have been used as specifics, in the cure of syphilis, and ends with a description of the so-called "hunger cure," to which he gives the preference over all the others. He also gives an analysis of some of the cases treated by Dr. Fricke, from July, 1825, to January, 1827, with one hundred and one men and three hundred and one women. It appears that fifty-one men and two hundred and fifty-seven women had primaries, thirty-six males and eighteen females secondaries in the throat, and eruptions without complications; fourteen males and twenty-six females had secondaries when first seen. And it appears, according to Dr. Oppenheim, that these patients remained on an average fifty days in hospital; whilst, when mercury was used, almost double the time was needed for the cure. Dr. Oppenheim writes as follows to Dr. Graves, in 1838, "In Hamburg, the number of non-mercurialists increases daily; among the young physicians, who have been practitioners for the last eight years, there are only two or three mercurialists." And, in a work on prostitution, by Dr. Sanger, published in 1860, I find that, "The treatment of syphilis adopted in the Hamburg Hospital was introduced by Dr. Fricke, one of the first to introduce the non-mercurial system. Ricord's system is also followed, and hydropathy has been tried."

In the "Letters Ecrites du Val-de-Grâce," by Dr. Desruelles, (Paris, 1840-41,) there is an account of the great national experiment made in Sweden, by order of the Government, during fifteen years, in which time forty-six thousand six hundred and eighty-seven cases were recorded. The following are some extracts from the "Circular Letter of the Royal Council of Health to the Medical Officers employed in the Civil and Military Hospitals, concerning the Venereal Diseases, which were there treated by different methods, from the year 1822 up to 1836, a period of fifteen years." "During the fifteen years, half of the cases have been treated by mercury, or forty-six per cent. by it, and fifty-four by the 'hunger cure.' In the year 1822, sixty-one per cent. were treated with mercury; in the next five years, fifty-five per cent. were treated with mercury; in the next five, forty per cent.; and in the next

five, ending 1837, twenty-five per cent. were treated with mercury. During the fifteen years which have passed, the relapses after the mercurial treatment have been thirty-three per cent.; after the simple treatment sixteen per cent. To the advantages which we have just related to you, you ought to add the amelioration remarked in the aspect of the relapses, of which the character has been less intense, and the dangers almost nil. Thus, we have rarely remarked ulcers of the nasal fossæ, of the throat, of the mouth, or diseases of the skin; a notable diminution has been especially remarked in the frequency of the affections of the fibrous and osseous systems; being twelve per cent. in 1822, and seven per cent. in 1837, and chiefly appearing in men who had taken mercury. Thus, it appears evident, that mercury should no longer be considered a specific indispensable for venereal disease. In most cases a simple *régime* and local treatment suffice. This result is very important, if we consider the accidents which the employment of mercury brings with it, even when employed in the manner most conformed to the end proposed. There are cases where mercury is useful; but then we ought to administer it in small doses, and make patients take a soothing diet. Signed at Stockholm, &c., &c., June, 1837."

CHAPTER VII.

RECENT OPINIONS ON THE TREATMENT OF SYPHILIS.

About the year 1838, M. Ricord obtained by competition, the post of Surgeon to the Hôpital du Midi of Paris. The effect of this illustrious gentleman's teaching was for long to found a school, the doctrines of which were considered almost too sacred to be questioned; but, of late years, a wholesome discussion of his opinions on the question of the use of mercury has been going on, both in Paris, Christiania, and London. M. Ricord divides ulcers into simple, inflammatory, phagedænic, and indurated. With regard to the first three varieties, he holds the views of Desruelles, Fricke, and others, and admits that they are better treated without mercury; requiring rest, topical applications, and aperients alone. Ho insists, with Hennen and Fergusson, on the fact that alcohol drinking is frequently a cause of phagedæna. He used to be in favour of cautery as a prophylactic against infection of the soft chancre; but, of late years, has become a believer in the dualist doctrines of his eminent pupil, Dr. Bassereau, and only uses caustic in such cases to cause the soft sore to heal quickly. He acknowledges that indurated sores heal very well without mercury; but when he "has before him an indurated chancre, he has recourse, as soon as possible, to a specific medication, that is to say, to a mercurial treatment." He is opposed to salivation, but says, "Six months of treatment, with a daily dose, which influences the accidents we have to combat, and which indicates, after disappearance, that the remedy still acts, by its well-known physiological effects: followed by a three months' treatment by iodide of potassium, destined to prevent the manifestations of the distant affections of the diathesis; such is, gentlemen, the course of treatment, which is attended by the happiest results, and which is followed in the greater majority of cases, by the complete neutralisation of the

poisonous virus."—(*Lettres sur la Syphilis.*) He gives the proto-iodide of mercury in doses of one, two, or three grains per diem, in pills; and then large doses of iodide of potassium, fifteen, twenty, sixty, or even more grains per diem.

Mr. Syme, the late illustrious head of the Edinburgh School of Surgery, speaking of this "modified" mercurial school, says, in his "Principles of Surgery," that it "injures the health no less effectually, than the process of poisoning which it professes to have so advantageously replaced," as he can testify from cases he has seen.

M. Ricord says with regard to iodide of potassium, (*loco citato*): "Thus I may say, that the iodide of potassium, at first advised as a general medicine for syphilis, and which gave such uncertain therapeutic results, has been definitively, by my clinical studies, reserved for that series of accidents named tertiaries, *on which the action is all powerful.*" Dr. Robert McDonnell, in his masterly lectures on venereal diseases, Dublin, 1868, says, "As students of the Irish School of Medicine you may look, gentlemen, with very just pride, to what has been done in this department by practitioners of Dublin. To Wallace we owe the introduction of iodide of potassium as an anti-syphilitic agent. Lancereaux (in his great work on Syphilis) also says that, in 1831, Lugol published cases of tertiary syphilis cured by preparations of iodine alone. Wallace of Dublin had the merit of first employing iodide of potassium, of fixing its doses, and pointing out the indications for it, whereby he definitively introduced iodine into the therapeutics of syphilis, and placed it almost on a level with mercury. He commenced in 1832, and gave the results in "The Lancet" of March, 1836; one hundred and thirty-nine patients were observed, of whom six had iritis, six affections of the testes, ten diseases of the bones and joints, ninety-seven syphilides, twenty affections of the mucous membrane; and three pregnant women were treated for the purpose of freeing the fœtus from syphilitic contagion. The preparation employed, *Mistura Potassæ Hydriadatis,* contained eight parts of the salt to two hundred and fifty of water. Adults took half an ounce four times a day, or about thirty grains of iodide in the twenty-four hours.

Mr. William Acton of London, in his work on the "Urinary and Generative Organs," London, 1869, gives M. Ricord's views, both as to the nature and treatment of the disease. In page 352, he says, "I presume there are few in the present day who dare

treat indurated chancre with local treatment only. It is my deliberate opinion, that mercury is absolutely necessary for the general treatment of indurated chancre. Authors, almost without exception, agree as to the necessity of mercury, in the treatment of indurated chancres; either for the treatment of the local affection, or for the prevention of secondary symptoms." In page 420, he adds, "I believe we should continue mercury for six weeks, to three months, or even six months, if it should be required; during which time the mouth should be kept slightly affected." Statistics of the mercurial treatment of syphilitic infants are, notwithstanding frequent assertions to the contrary, not very satisfactory, for Mr. Acton says, that "out of eighty-five infants, who, in the year 1854, were born in the Lourcine Hospital of Paris, or, being under two years, entered with their mothers, I find that not less than twenty-four perished by the disease."

The late Mr. Syme, in his "Principles of Surgery," says, that very different amounts of mercury were found to produce the bad effects seen so frequently in former days. Scrofulous persons and those who had already taken much mercury, fell easy victims to this misguided treatment. He usually treated primary sores locally by nitrate of silver, as soon as possible after the appearance of the disease, and then by black wash or sulphate of copper lotion. For phagedæna, he recommended bread and water poultices at first; and, subsequently, a strong solution of sulphate of copper, (a scruple to the ounce,) also leeches, and opium fomentations, with aperients. In mercurial sloughing, he used caustic potash applications. "If secondary symptoms appear they should be treated," says Syme, "merely by the ordinary principles which guide the practice in regard to them when arising from other causes. In affections of the skin and throat, it is much better to abstain from mercury altogether, and either trust entirely to local means, together with suitable regimen, or to employ iodine in some of the forms in which it is usually prescribed. In affections of the periosteum and bones iodine is also found generally useful, the appropriate local treatment, and especially the regulated application of blisters, being at the same time employed." In the Edinburgh "Medical and Surgical Journal," vol. xxxiii, page 21, in an article "On Ulcers of the Lower Extremity," Professor Syme says, "Such ulcers used formerly to be treated with mercury anew, which delusion too frequently led the patient, by progressive steps of emaciation, weakness, and disease, to the grave. The enlightened views

of the late Dr. Thomson gave Edinburgh a distinguished place in reforming this department of medicine; . . . it was long since abandoned in this school, and succeeded by treatment of a local kind." Mr. Syme recommends two grains of iodide of potassium in water, thrice a day for such affections. Sir James Paget, too, seems to consider this quantity sufficient; but many authors think that much larger doses of iodine are required.

Mr. George Critchett, late surgeon to the London Hospital, although as we have seen in favour of mercury in iritis and syphilitic retinitis, yet, in his classical "Lectures on the Ulcers of the Lower Extremities," 1848, informs his readers, that such ulcers come on after constitutional (mercurial?) treatment has been long tried in vain, and says, in page 99, "Under such circumstances, the ulcer will maintain its original form and specific character; but yet is capable of being cured by local means only." He uses equal parts of chloride and oxide of zinc, which he sprinkles on lint and packs into the ulcer. The author can speak with great praise of this plan of that most eminent practitioner, and would only add, that large doses of iodide of potassium should be exhibited, simultaneously with the local treatment recommended.

Dr. Hughes Bennett, in his standard work, entitled "Principles and Practice of Medicine," is a bitter opponent of mercury in the treatment of all kinds of diseases; but more especially in the case of syphilis. One of the expressions made use of in that work, page 499, is as follows: "The idea that mercury is a specific for the syphilitic poison, and the incalculable mischief it has occasioned, will constitute a curious episode in the history of medicine at some future day." This resembles the uncompromising expression of Bœck, that it is a "devilish remedy" in syphilis. After adverting to the deep gratitude which the world owes to Drs. W. Fergusson, Hennen, J. Thomson, and others, Dr. H. Bennett adds, "In England, the Hunterian theory and practice has been deeply rooted; and, in Ireland, has been supported by the writings of Carmichael and Colles. Mercury in consequence is still very generally employed in these parts of the kingdom. The gigantic experiments made abroad, however, ought to convince the most sceptical. If not, let them compare what syphilis is in Scotland, with what it was." Professor Bennett also mentions how, in 1833, the reports of the French *Conseil de Salubrité* were published, with reports from the physicians and surgeons attached to the military hospitals in various parts of France. "They all

agree in stating the cures by mercury to be a third longer than by the other method. Between 1831-34, five thousand two hundred and seventy-one patients had been thus treated; and the number of relapses and secondary symptoms calling for the employment of mercury was very small. In the various reports thus published, eighty thousand cases have been submitted to experiment; by means of which it has been perfectly established, that syphilis is cured in a shorter time, and with less probability of inducing secondary symptoms, by the simple, than by the mercurial treatment. Seventy years ago, the most frightful secondary and tertiary symptoms were met with at the Edinburgh Infirmary, and the usual treatment was profuse salivation."

Mr. Weeden Cooke, late surgeon to the Royal Free Hospital of London, has given in a pamphlet, ("On the Relative Influence of Nature and Art in the Cure of Syphilis," London, 1861,) the result of his experience in the Royal Free Hospital, one of the largest fields of observation for syphilis in London. He there states that "the Hunterian chancre may be treated without mercury, and in many instances no constitutional effects may result;" also that "when secondary symptoms do follow this chancre, they are less severe when mercury has not been administered." After referring to the fact, that his most eminent colleague, Mr. De Meric, has often "bemoaned the insufficiency of mercury in syphilis," Mr. Cooke adds, "By abstaining altogether from mercury, I observed that, although some persons were exempt from constitutional affection, others had cutaneous eruptions, sore throat, and falling off of hair; but in a remarkably modified form. A long continued observation of the results produced in Nature's own workshop, could not fail to convince anyone, whose mind was not biassed by a foregone conclusion, that the cutaneous eruption was the natural means of relieving the blood of the venereal virus, with which it had been inoculated; and that by suppressing the purifying process, the virus was retained in the system, to spend its venom upon deeper-seated and more important tissues. Hence the fundamental error of mercurial treatment, which suddenly checks the natural cure of the disease by cutaneous elimination; but adds to the tissues, already poisoned, a metal, whose influence tends most unquestionably to increase the dyscrasia already existing." Mr. Cooke recommends the Turkish bath in secondary eruptions, forbids tobacco smoking and spirit drinking, and in phagedæna, recommends a lotion composed of two

grains of permanganate of potash in the ounce of water. In sloughing sores, he uses nitric acid.

In a most laborious and elaborate work by Professor Bœck of Christiana, entitled "Recherches sur la Syphilis," there is a detailed account of the treatment of syphilis in Norway, with mercury, without mercury, and by means of syphilisation. It seems that in the Christiania Hospital, there were three hundred and forty-eight males and one hundred females treated by Hahnemann's soluble mercury; three hundred and eighty-five males and eighty-one females were treated by calomel; forty-six males and twenty females were treated by proto-iodide of mercury; one hundred and forty-nine cases were treated by Epsom salts and topical remedies; twenty-two cases by iodide of potassium; and three hundred and forty-four cases were treated by external remedies. Professor Bœck wished to see whether any treatment was capable of preventing secondary symptoms. In one thousand and eight cases treated by mercury, two hundred and forty-two, or twenty-four per cent., became affected; and in five hundred and twenty-two treated without it, seventy-seven, or fourteen per cent., became affected. Professor Bœck, in a visit paid to London, in 1866, assured the author and his friend, Mr. R. W. Dunn, that he would be quite content if his experiments in London should lead London practitioners to discard mercury, which he forcibly styled the "devilish remedy" in syphilis.

"The Medical Times and Gazette," June 2nd, 1863, contains a proclamation, addressed by the Surgeon-General of the United States Army, (which is curious after reading Dr. W. Fergusson's proclamation in 1810), dated May 4th, 1863, which shows that mercury is no longer likely to be very much used, for some time at least, in the States. "From the reports of the inspectors and the sanitary reports to this office," says the document, "it appears that the administration of calomel has so frequently been pushed to excess by military surgeons, as to call for prompt steps by this office to correct the abuse; an abuse, the melancholy effects of which, as officially reported, have exhibited themselves, not only in innumerable cases of profuse salivation, but in the not unfrequent occurrence of gangrene. It seeming impossible in any other manner to properly restrict the use of this powerful agent, it is directed that it be struck from the supply table. This is done with the more confidence, as modern pathology has proved the impropriety of the use of mercury, in very many of those diseases, in which it

was formerly unfailingly administered." This seems to show that many persons in America dislike mercury.

At a meeting of the Royal Medical and Chirurgical Society of London, February 10th, 1863, reported in "The Medical Times and Gazette," Mr. Holmes Coote is reported as saying, "Respecting the treatment of primary syphilitic sores, he entertained no doubt, in the first place, that mercury was unnecessary in by far the greater number of cases; in the second place, that when administered, even in the best selected cases, that mineral afforded no security against the occurrence of secondary symptoms. He thought that the use of mercury was, to enable the surgeon to expedite the healing of the indurated chancre." And Mr. Spencer Wells is reported to have said on the same occasion, how that reports show, "not only that mercury is no preservative from secondary symptoms, but that it actually retards the cure of the common, or non-indurated sore, although it hastens the healing of the indurated sore, or true Hunterian chancre. And they prove, not only that mercury is no preservative from secondary symptoms, but that the frequency and severity of the secondary symptoms are increased in direct proportion to the quantity of mercury; and that many of the more formidable varieties of tertiary disease are caused, not by syphilis, but by mercury. The true use of mercury is, in small quantities, in the treatment of the primary indurated sore, and in some forms of secondary disease."

Dr. Diday of Lyons, in his work on the "Natural History of Syphilis," (Paris, 1863,) says, "I have seen syphilis, though treated methodically by specifics, last for a long time, give rise to after affections of the skin, to iritis, disease of the testicle, and then to the so-called tertiary affections, relapse under this form almost indefinitely; and even though the disease was apparently cured, a tendency to the generation of infected children remain. I call this state of matters severe syphilis. On the contrary, and more frequently, I have seen syphilis, though treated without specifics, limit itself to superficial lesions, to two or three crops of cutaneous eruptions, (the severity of which gradually diminishes,) the health being then completely re-established as proved by the procreation of healthy children. I call this state mild syphilis." Further on, he says, "I impute to mercury positively, and on sufficient clinical evidence, the following disadvantages:—(1) Rendering the ulcer phagedænic; (2) Occasioning stomatitis and necrosis of the alveolar borders; (3) An acute affection of the gastro-intestinal

canal and dyspepsia; (4) Trembling of the extremities; (5) Apoplexy (this is rare); (6) Insanity. All these accidents I have seen supervene, as the results of treatment ordered and superintended by most competent and most attentive practitioners. As, moreover, I have seen syphilis, when treated without mercury, in general recover, and as I have collected numerous observations, where the persistence of the cure has been observed at the end of four, five, six, or seven, and even fourteen years, I believe that I act in the interest of my patients, in not prescribing mercury indiscriminately, in every case." These quotations were made by the author in a work, issued in October, 1863, from the above treatise of Dr. Diday; but it seems that that gentleman, on reading a French translation of the author's pamphlet, was not content with what was thus extracted from him, for, in Dr. Bumstead's work on "Venereal Diseases," 1870, page 484, we read, "While, therefore, I (Dr. Bumstead) believe in the spontaneous cure of syphilis, I cannot subscribe to the invectives against mercury made by Dr. Drysdale and others, when judiciously administered. Even Diday 'protests against Dr. Drysdale's anti-mercurial exaggerations, and against his (Dr. Drysdale's) statement that we (Diday) agree with him.'—*Gaz. Med. de Lyon, May* 1, 1864."

In the month of August, 1863, the author, being on a visit to Paris, took the opportunity of ascertaining the views of some of the leading physicians and surgeons on the question of using mercury in syphilis. Dr. Cullerier, he found, was well acquainted with the fact, that cases of syphilis frequently did very well without mercury. Dr. Alfred Fournier at that time told the author, that he waited till the roseola disappeared before giving mercury in syphilis; but Dr. Cazenave treated gonorrhœa and all kinds of sores by small doses of mercury. Dr. Hardy, too, was a strong advocate of mercury in syphilis. In the autumn of 1866, after long and interesting discussions in the Harveian Society of London, in which the author enjoyed the inestimable benefit of the criticism of Messrs. V. de Meric, H. Lee, James Lane, G. Gascoyen, Weeden Cooke, and other leading London authorities on this important point, on another visit to Paris, he found that Dr. Paulet, surgeon and professor of anatomy in the Val-de-Grâce Hospital, was a strenuous supporter of the non-mercurial treatment of syphilis. In a short letter to the author in 1867, at the time of the *International Congress of Paris*, M. Paulet writes, "I have commenced since 1862, a series of researches upon the comparative value of

different mercurial remedies, and of expectation, in cases of syphilis (in the army), at all periods of the disease; and up to this date (1867) I have noticed no very appreciable difference in the results. As to whether syphilis is capable of being cured perfectly, I lay it down as a principle that it is impossible to decide anything on this point, until we have followed a sufficient number of patients for ten years at least. This is what I am undertaking." This note was read by the author before the Congress, in 1867, M. Ricord being President at the time.

The year of the Congress, 1867, was signalised by an interesting discussion in the Parisian Société de Chirurgie. (*Gaz. des Hop.*, 1867). *M. Dolbeau*, surgeon to the Lourcine Hospital of Paris, in the course of an opening address, said, "Must we follow any specific treatment when roseola, mucous plates, &c., appear? Must we give mercury? This is probably the practice of all of you; but it is no longer mine. When I count the numerous observations of non-treated syphilis, which daily present themselves, at the latter period of their evolution, I would speak of these tertiary accidents, *which we cure so easily with iodide of potassium*, although the patients have never submitted to any mercurial treatment, and when, finally, I pass through my mind the numerous cases of relapse which I have observed after the most careful treatments, I ask myself, of what use is mercurial treatment?"

M. Deprés, surgeon to the Lourcine Hospital, also shared the opinion of M. Dolbeau. He asserted that patients, treated for syphilis with tonics and local means, had not returned in greater numbers with relapses, than those treated with mercury by Drs. Jaccoud, Panas, &c. Also, that patients had entered with relapses, after taking two hundred and fifty to three hundred pills of proto-iodide of mercury. *Dr. Cullerier* explained that he did not treat the chancre with mercury; but commenced with Van Swieten's liquid (see formulæ) when secondary eruptions came on. "In private practice many patients would not always take mercury," he added, "and yet got well." *M. Lefort*, at that time surgeon to the Hôpital du Midi, said that he had tried non-mercurial treatment; but the results had been so bad, that he dared not go on with his experiments. *M. Dolbeau*, being called on by the President, reiterated his conviction that mercury did not prevent the appearance of either secondary or tertiary accidents; that iodide of potassium was a remedy, for the most part of inestimable value, in the tertiary period; and that the action of iodide of

potassium is not in any way aided by its admixture with any form of mercury. *M. Maurice Perrin* mentioned that the contemporaries of Desruelles had corroborated how that surgeon had succeeded better by non-mercurial treatment, than others by using mercury. "To submit," he said, "without motive, and as if by routine, to the use of an energetic agent, such as mercury, the numerous tribe of syphilitic patients, is this not systematically to enfeeble the individual, and perhaps introduce a real cause of degeneration among the masses?" He then detailed an experiment he had made in the Val-de-Grâce Hospital in 1858, with and without mercury, which resulted in making him say, that mercury does not modify the progress of syphilis, or put off the epoch of ulterior syphilis. *M. Verneuil*, in the meeting of 8th May, 1867, expressed himself in favour of mercury in syphilis, where there is iritis, periostitis, alopecia, or persistent headache. He believed in the preventive efficacy of mercury in tertiary accidents; saying that the majority of patients with tertiary lesions had not had enough of mercury. Moreover, he asserted that iodide of potassium very often modified tertiary symptoms; but not always. Iodide of potassium, in a certain number of cases, does not succeed at all, and sometimes cannot be tolerated; but he granted that it is *generally* very well tolerated, but does not prevent relapses supervening. Mercury, it is true, does not absolutely prevent the development of secondaries; but he believed they were less severe when it was used. The cure of syphilis required about a year and a half, said M. Verneuil, when the successive outbreaks are treated by mercury. Syphilitic headache, iritis, and amblyopia, all are benefited greatly by mercury. *M. Velpeau* was convinced that syphilis got well of itself pretty often; but that mercury was often needed to arrive at a good result. He said that in order that iodide of potassium should be efficacious in syphilis, it must have been preceded by a course of mercury. *M. Deprés* brought forward a number of statistics, to prove that patients at the Hôpital Saint Louis, with tertiary symptoms, had usually been vigorously treated by mercury. He adverted to the fact, that most French medical men objected to mercury in tertiary cases, whilst Virchow said that these were precisely the cases in which it should be used. In malignant syphilis, few persons give any mercury; but rather tonics and iodide of potassium. Speaking of Dr. Depaul's account of an epidemic of vaccino-syphilis at Morbihan, in 1866, he observed that the children treated there without mercury seemed to do

better than those treated by mercury. Deprés was not disposed to admit that mercury in any way prevents iritis. Mercury has long been considered a debilitant and a poison, and M. Deprés said, in conclusion, "If I had syphilis, I would not take mercury." Mercury, he added, causes an aggravation of syphilis, and is given by routine.

M. Depaul stated, in the debate, that in syphilitic women, if mercury be given, the pregnancy, which otherwise would have ended in abortion, often continues its course, and thus he had seen women bring living children into the world, after having had two, three, or even five miscarriages. He also advised the use of mercury in syphilitic children, saying that it acts in a marvellous manner in such cases. "Five years ago," said Depaul, "in consequence of an unfortunate vaccination, seven infants were infected; all were treated for six weeks, or two months, and all were cured; since then, two have succumbed to intercurrent diseases." *M. Panas* said he did not think from his experiments that mercury in any way retarded secondary manifestations from appearing, although he had used iodide of mercury thirty days before they appeared. *M. Deprés* observed that he had cured many cases of syphilitic iritis without mercury, by leeches and blisters, and had only had relapses when he could not prevent synechiæ by prolonged dilatation of the pupil by atropine. He cited facts from the Lourcine Hospital, to show that mercury does not prevent abortion in pregnant women.

M. Diday, of Lyons, observed that mercury does not prevent secondary symptoms; but it is of use in making these milder, although it does not prevent relapses, or destroy the diathesis. Children of syphilitic parents are, as a rule, less and less likely to be affected, as time goes on. He gives no mercury for indurated sores, or for secondary eruptions, if they are slight; but, if there are squamæ and pustules, he gives it. He gives it also in iritis, onyxis, and dysphonia; but not in palmar psoriasis or mucous tubercles, because it is of no use in these. He continues, for eight to ten days at a time, to give a grain and a half of proto-iodide of mercury daily, and rubs in one drachm of mercurial ointment each day, until the gums are touched. Then he leaves off the mercury for a time, and resumes it again. Syphilis is not contagious in the tertiary period. Iodine is only a very excellent palliative for tertiary disease. M. Deprés brought forward more cases from the Saint Louis Hospital, to prove that persons with tertiary syphilis had usually

taken plenty of mercury, and mentioned two cases of syphilitic infants treated with mercury, one of which died, and the other was reduced to extreme emaciation on leaving the hospital. Also three women, who had not taken mercury, were syphilitic, and had living and healthy children. This interesting debate will doubtless do much to clear up the obscure points in the treatment of this very important disease.

It may be mentioned, that the late lamented Professor Von Bærensprung of Berlin was much opposed to the use of mercury in syphilis; and in his pamphlet, "On Hereditary Syphilis," (Berlin, 1864,) there is the following passage. "Roseola, lichen, and psoriasis are the three forms of eruption of the secondary period. There is never any deep ulceration seen, nor formation of pus, loss of substance, or scars, the surfaces soon resuming their normal appearance. These, in the great majority of cases, form the picture of syphilis in its entirety. These may last for weeks or months, partially disappear, and, after a shorter or longer interval, reappear, or lastly vanish altogether, with the complete disappearance of the disease. At least, I can testify that, among the now countless cases where I have treated syphilis only by diet, tonics, and purgatives, with the entire exclusion of mercury, and seen it entirely cured, never have any other symptoms but these papular and condylomatous forms appeared, with, in a few cases, iritis, periostitis, or orchitis; but in no single instance have destructive ulcers, perforations, or necroses been observed." The author quotes this passage without agreeing with it, as, of course, cases of rupia must have been seen by the learned professor; but the passage is very valuable, coming from the Professor of the Charité.

SYPHILISATION.

The medical world in all countries has been for some years past, much interested in the experiments which have taken place in Norway, on the treatment of syphilis. A short time after Dr. Bœck commenced practising syphilisation in Christiania, (according to Dr. Heiberg in a small pamphlet written in 1868, at Christiania,) the French Academy's decision almost proscribed syphilisation in Paris. Bœck for some years, it seems, took pus only from hard sores to syphilise with, irritating the hard ulcers with savine ointment. Generally the inoculation, (according to Bidenkap,) gives a re-inoculable pustule, without incubation. Every three days, inoculations (with six inoculation points) were made on the

sides of the chest; afterwards on the arms, and, finally, on the thighs, until no more pustules would arise, which, it was said, usually took place after thirty generations of pustules. In persons suffering from syphilitic cachexia, the pustules sometimes would not appear for some time; perhaps several weeks, in some cases. Some persons were quite refractory to all inoculations, although inoculated every day. After two months or so of syphilisation, the different symptoms of constitutional syphilis were wont to disappear; eruptions vanished, and ulcers of the mouth got well. Iritis required no peculiar treatment, except dilatation of the pupil by atropine, to prevent adhesions. Tertiary symptoms were much ameliorated, and required only a little iodide of potassium to make them heal entirely; but bony tumours were rarely absorbed. Mucous tubercles were obstinate. The health improved during syphilisation; but relapses in symptoms were frequent, if the process were not continued till no more pustules could be raised. When mercury had been used, it required longer time and more trouble to conquer the disease. In newly-born children, syphilisation did not succeed at all, unless when practised daily; and even then, not for a fortnight, nor can it usually be carried on as in adults, or do so much good.

Dr. Hjort of Christiania, thinking that syphilisation might act merely as a revulsive, tried the effect of tartar emetic ointment with careful diet, in several cases of syphilis. This process was not used for infants. The symptoms often vanished during this practice, and no relapses were seen. Expectation was then tried, and the author's esteemed friend, Dr. Adam Œwre of Christiania, seems to think this as good a way of treating the early stages of syphilis as any. Dr. M. Mackenzie of London seems to think so too. Hjort, and others, frequently found roseola, mucous plates, and excoriations of the throat, with such treatment. These sometimes disappeared without any relapses taking place; or other eruptions of the secondary period arose and gradually disappeared; or the disease, in rare cases, continued grave, and the patients' health was much affected. In these cases, syphilisation was used. It was found, however, that no plan could certainly prevent the birth of syphilitic children. Dr. Hjort says (Heiberg, loc. cit., p. 12) that after mercurial treatment, tertiary symptoms came on pretty frequently; but that these were rarer for the past twelve years, since mercury had been greatly abandoned. He added, that phagedænic ulcerations, paralysis, epilepsy, insanity, and other

like diseases, were only very rarely witnessed, and that, even in such cases, they had for the most part been treated by mercury in past times. In the "Recherches sur la Syphilis" of the esteemed and learned Professor Bœck, many cases of infantile syphilis, treated by, and without, mercury, are given; and there does not seem to be much difference in the results of the practice in these very fatal cases. A lively discussion took place in Christiania (Norsk. Med. Arch., 2 Hft. 1869) in 1869, at the Medical Society, on the subject of syphilisation, after the visit of Dr. Bœck to London, and the report made by Messrs. Lane and Gascoyen on his experiments at the Medical and Chirurgical Society, in 1866. *Dr. Œwre* maintained that Bœck's statistics were not accurate, and said that expectation was the best treatment of the disease. He was entirely opposed to syphilisation, which he maintained did no good. *Dr. Bidenkap* was much opposed to using mercury in secondary symptoms, because it made the patient more likely to have relapses. In the tertiary period, iodine will often make the symptoms vanish after a short time, and give a certain feeling of health to the patient. Relapses will occur, and may again be banished by iodine, which will be as necessary to the patient as his daily food. He did not think Œwre's expectation plan a good one. He looked on syphilisation as a really curative measure, and for five years hard chancres alone had been used for inoculating from. He thought it did *some* good in preventing women from giving birth to diseased children. *Dr. Hjort* said that derivation (*i.e.* counter-irritation by tartar-emetic ointment pnstules) and syphilisation seemed to give nearly equal results. *Dr. Gjor* was in favour of syphilisation. *Dr. A. Holst* said that Bœck had shown the Norwegians that syphilisation was useful; and, at any rate, that mercury was injurious. *Dr. Wilse* approved of syphilisation, as did *Dr. Baeker* and *Dr. Winge*. *Dr. Lund* said that he was much pleased with syphilisation; and, even if this plan were discontinued it was not likely that mercury would again be used. *Professor Voss* declared that syphilisation was the best method of cure for syphilis.

Messrs. Lane and G. Gascoyen, in the report to the Royal Medical and Chirurgical Society of London, 1866, say with regard to syphilisation, "Differing as we do on the scientific aspect of the question, we are entirely in accord as to its practical bearings, and we are decidedly of opinion that syphilisation is not a treatment which can be recommended for adoption. We consider that, even

if it could be admitted to possess all the advantages claimed for it by its advocates over other modes of treatment, or in many instances no treatment at all, it would not sufficiently compensate for its tediousness, painfulness, and the life-long marking which it entails on the patient." The author's most esteemed and eminent friend, Dr. R. McDonnell, mentions in his pamphlet, "On Venereal Diseases," (Dublin, 1870,) that Auzias-Turenne, in 1845, originated syphilisation; but was not allowed to make use of it. Sporino, Robert of Marseilles, and Bœck carried out Auzias' idea. The author is not of opinion, from his own experience, that syphilisation is likely in future often to be used in syphilis. Iodide of potassium is so useful in severe cases, and other cases do so well of themselves, that there seems but little room for Bœck's plan.

Among the Minutes of Evidence of the Admiralty Commission of 1865, are some most interesting opinions of our most eminent London writers on syphilis, as to treatment, which are well worth reproducing here. *Mr. W. Acton* said that mercury removes the induration of the hard chancre, and he is "sure that mercury gives an exemption from secondary symptoms." It takes from three to six months of mercurial treatment to cure an indurated sore. Many persons thus treated have secondary symptoms and relapses. *Mr. Langston Parker* did not think that treatment by mercury gave any exemption from secondary symptoms; but he gives mercury sometimes to heal the hard sore, which resists all other treatment. The dry and scaly eruptions almost invariably yield to mercury; but the pustular do not so certainly. In the pustular and tubercular forms of syphilis, he thinks the iodides with bark are most useful. The scaly forms relapse four or five times and then disappear, with or without mercury. In infantile syphilis he rubs in mercurial ointment on the soles of the feet. This is very successful; "as a rule they get well." The virtues of iodide of potassium, he thinks, have been over-rated. He has no faith in sarsaparilla. *Mr. Jonathan Hutchinson* treats indurated sores with mercury; but left it off for two years at the Metropolitan Free Hospital. He should not say it exercised much influence on the constitutional symptoms. He treats secondary symptoms by doses of one-eighth of a grain of bichloride of mercury twice a day, making the gums sore twice or thrice during the treatment. Iodide of potassium is more efficient than mercury in the tertiary period; but it does not prevent relapses. The tertiary stage is absent in perhaps the majority of cases of syphilis. Mercury shortens the

stages, which is of great importance where the eye is concerned. Mercury is not of much use in hereditary interstitial corneitis. Iodide of potassium is useful, even when mercury has not been given. Iritis and retinitis are curable; they clear away even in hereditary cases. Not one in fifty of them cause permanent blindness. Has seen severe bone disease in patients who have taken mercury for syphilis, as well as in those who have not taken it. *Mr. Solly* thought that, in one case of fifty, mercury would prevent the coming on of secondaries. He gave five weeks of mercury for the chancre, and six weeks of it for secondary eruption. *Mr. V. De Méric* gives mercury when the primary sore is truly indurated, and keeps it up for weeks or months, if the patient will allow him. Mercury does not prevent the appearance of secondaries. He gives a grain of iodide of mercury twice or thrice daily. The results of non-mercurial treatment were not bad in France. He treats phagedæna by nitric acid locally. Patients in hospital practice are sometimes much salivated by mercurial treatment, and he uses hydrochloric acid in such cases to the ulcerated gums. *Mr. Holmes Coote* said that, in his male ward at Saint Bartholomews, no mercury had been given for many months; it is chiefly given there for secondary symptoms. He uses concentrated nitric acid, containing one-third of water, as an escharotic. Gives two and a half grains of mercury with chalk twice a day for secondary symptoms. The worm-eaten skulls of the museums were caused by mercury. Thinks iodide of potassium very valuable in tertiary syphilis. *Professor Bœck* thought that after syphilisation mothers sooner had healthy children, than when mercury was given; in the latter case, we are never sure that a woman will have a healthy child. Three months and a half is the average time taken by syphilisation, and he is perfectly satisfied of the value of this method of treatment. Patients in Christiania are never treated by mercury. Cures iritis by syphilisation alone. *Dr. P. Heron Watson* treated by expectation or syphilisation. Formerly used mercury. He was a *dualist*, and used syphilisation, like a seton, as a derivative. Mercury did not cure tertiary symptoms; but iodide of potassium checked them for a time. Syphilisation was the most satisfactory treatment in such cases. Syphilis usually, if left alone, comes to an end with the roseolar eruption. He seems to think that iodide of potassium, in secondary symptoms, is more likely to cause tertiaries than if the disease be only locally treated. He treats indurated

sores locally. Has found iodido of potassium of great service in tertiary syphilis; but it lowers the constitution. Found no objection to syphilisation among his richer patients. *Sir James Paget* thought that mercury was a specific in syphilis; it will shorten its duration, and sometimes prevent secondary symptoms. He does not treat phagedæna with mercury. "The worst forms that syphilis can produce, are so produced by the help of mercury, when it is carried too far, or so given as to injure severely the system of the patient. The effects are much worse than would be produced by syphilis alone. I am sure," says Sir J. Paget, "that I have seen persons who have taken no mercury, suffering from the worst effects of syphilis, in ulcerative disease of the bones; on the other hand, the largest number of those whom I have seen suffering from the worst effects of syphilis, have been those who have taken mercury for the treatment of syphilis, and in whom the mercury has produced unfavourable effects." If syphilis is left alone, the patients may spontaneously recover; but the severity and duration of the disease is diminished by mercury. Mercury has, in some few instances, produced bone disease, very much like syphilitic disease, in persons who had not had syphilis. Should expect a patient to be well in three months after taking mercury. Iodido of potassium is useless in primary syphilis, and of little use in the early scaly eruption; for the periosteal pains and ulcers of integuments, it will almost certainly cure them more quickly than mercury, but relapses appear. *Sir W. Lawrence* said he had great faith in iodide of potassium in tertiary symptoms. The giving of mercury was formerly a serious evil of itself. The patients were all salivated, and hence the name "foul wards" of Saint Bartholomews. In bad ulcers of the throat, cinnabar fumigations were formerly used, but had been abandoned for some years, as iodide of potassium came into vogue. *Mr. Savory* had seen a large number of cases of syphilis treated without mercury, and, speaking broadly, the majority sooner or later got well. His impression is that mercury, judiciously given, tends, as a rule, to shorten the course of the disease; but the rule has many exceptions. He speaks with great diffidence, as there is much evidence on the other side. *Mr. Erichsen* gives mercury for *all* primary sores, except the phagedænic; but does not remember any cases where secondary symptoms have been avoided by such treatment. Expects mercury to lessen the severity of secondary symptoms. Iodide of potassium is very beneficial in ostcal and

periosteal swellings and pains. *Sir William Jenner* said he treated all syphilitic children with mercury, and a large proportion thus treated got well. Grey powder was used. He never saw ill effects from mercury in children, except bowel complaint. The result of treating children without mercury was most fatal. He preferred treatment by mercury so much, that he "should consider himself guilty of the murder of a child, if he treated it without mercury, and it died." *Dr. Arthur Farre* said he always employed mercury in infantile syphilis. Syphilis in infants is one of the most easily cured complaints, provided the treatment was commenced early enough. One or two grains of grey powder at night cured easily enough about three-fourths of the cases which came before him. It is difficult to treat them when atrophy has commenced: then the difficulty of treating by mercury alone is very great, and he was obliged to employ tonics and sarsaparilla in such cases. Gives the grey powder from three to six weeks. When the child has had syphilis many weeks or months he prefers iodide of potassium to mercury. *Dr. Barnes* uses, in syphilitic infants two or three days after birth, equal parts of nitrate of mercury ointment and spermaceti ointment, about the size of a walnut, on a flannel band, worn round the waist for two or three months. Has known many women who have given birth to healthy children, after a course of treatment partly during pregnancy, and partly in the interval before conception has again taken place. The iodide of potassium is here sometimes of value. *Dr. Bidenkap* said he used syphilisation for infantile syphilis. A great number of such infants die: but the mode of treatment is better than any other, even in infantile syphilis. *Mr. R. W. Dunn* said he used to lose one in every five or six patients when he used mercury for infantile syphilis; but recently he had treated fifty-three cases with tonics, with only three deaths. *Mr. W. Allingham* said that of seventeen cases of infantile syphilis treated by Dr. Griffiths with mercury and chalk, nine were cured, four died, and four were not seen again. After 1862, he (Mr. A.) treated such cases without mercury and with tonics; and of forty-eight cases so treated, six had died, all of them being under three months of age.

In a note concerning the treatment of hereditary syphilis by Dr. Steiner, (Œsterr. Jahrb. f. Pädiatrik, 1860,) that gentleman says, that, of all known remedies, mercury is the one which makes the syphilitic eruption disappear the most rapidly; but it does not prevent relapses. Calomel, used both internally and externally, is

the most suitable remedy, he says, for children. He asserts that the principal result of his experiments in treating hereditary syphilis by iodine has been, that the remedy makes the signs of the disease to disappear, although not so rapidly and surely as the mercurial treatment does; and that relapses are not prevented by the use of this remedy. He also states that the continued use of iodine injures the nutrition, and produces symptoms of iodism. If he must judge between the two treatments, he would necessarily give the preference to mercury. The treatment of hereditary syphilis by the natural powers of the system being supported, or without mercury and iodine, is, he says, much less effectual than the method spoken of, especially in the certainty and rapidity with which the syphilitic affections disappear. Lastly, Dr. Steiner speaks as to the way in which the medical man should act, when the question of allowing a syphilitic child to have a healthy wet-nurse comes before him; and, although he believes that this is the sole chance, in many cases, of preserving the child's life, he is of opinion that the medical man ought not to expose a nurse to the danger of giving suck to a syphilitic child. In this the author agrees.

The author of this work has, for many years past, been in the habit of treating all cases of syphilitic infants by means of one grain of the iodide of potassium, in a teaspoonful of water, thrice daily; and has often been much pleased with the rapid manner in which the eruptions have disappeared, and iritis been resolved. He has, in former years, seen so many cases which were treated by mercury succumb, (sometimes he had thought *owing* to the use of the mercurial belly-band,) that he cannot understand how Dr. Farre and Sir W. Jenner can speak in such enthusiastic strains of the remedy. Besides which, the cases recorded in Bœck's work, "Recherches sur la Syphilis," show, that the disease is very fatal when mercury is used, and also when it is not used. When children have eruptions immediately after birth they generally succumb. If the eruptions supervene only after two months or so, they will often get well if treated by iodine, or even if let alone.

With regard to the *prevention* of syphilitic children, by treating the mother, the author is quite convinced that in this point the use of iodine is very beneficial. Among the many cases that have led to this conclusion is that of a young woman, who attended at the Metropolitan Free Hospital for a year at his advice, after giving birth to four syphilitic children in previous years. She took ten-grain doses of iodide of potassium for a year at intervals,

and has now (1871) a healthy child more than a year old. The first case in which the mother was thus treated by the author was in 1862, and the second child of the mother, now seven years old, is quite healthy, and has never had any marks of syphilitic disease. In numerous instances, where women have been much mercurialised, he has seen syphilitic children born for years.

Mr. Berkeley Hill, in his admirable treatise *On Syphilis and Local Contagious Diseases*, (1868,) expresses himself in favour of mercury in the form of blue pill in indurated sores and secondary symptoms, and uses large doses (sometimes as much as eighty to a hundred grains) of iodide of potassium daily in ozæna or tertiary cases. His treatise, however, is so valuable that all should consult it for themselves. Mr. Henry Lee's opinions unfortunately were not given to the Admiralty Committee: but in his classical *Lectures on Practical Pathology and Surgery*, (1870,) vol. ii., he says "In practice it may be convenient to give mercury internally; but it can rarely be borne long enough in this way to cure the disease. When the eruption occurs under these circumstances afterwards, it presents often a troublesome and worse form of disease, than if no mercury had been given. Iodide of potassium has a considerable power in removing syphilitic eruptions and other forms of secondary and tertiary syphilis: but it does not cure the disease." In company with Mr. Prescott G. Hewitt, Mr. L. Parker, and others, he is greatly in favour of the "calomel vapour bath." He treats all cases of syphilis by volatilising calomel by means of a spirit lamp, the patient sitting on a cane chair, enveloped by a blanket. The steam of hot water accompanies the calomel vapours. The patient inhales the vapour for half a minute, whilst taking the bath. Dr. R. McDonnell, in a work entitled *Lectures and Essays on the Science and Practice of Surgery*, (1871,) page 80, says "In fact, patients cured by the calomel vapour bath are cured by non-mercurial treatment. I am now satisfied that calomel used in this way has no specific effect. It is not absorbed by the unbroken skin. It is simply the vapour bath acting beneficially on a malady which has a natural tendency to get well of itself." Of course Dr. McDonnell would not say this in the case when the vapour is inhaled, as Mr. Lee seems to recommend.

In a lecture on the treatment of syphilis, delivered in the month of August, 1871, at the Lourcine Hospital, and listened to by the author, Dr. Alfred Fournier said, that the physiological school and many authors had spoken against the use of mercury in syphilis,

"Some say that the disease is a mild one, and that mercury is in general not indicated. But the very patient under our notice may have disagreeable symptoms, such as skin eruption, alopecia, neuralgia, iritis, with sarcocele. Gummy tumours and paralysis may occur in any given patient. The patient before us may die of cirrhosis of the liver, or have exostoses on the bones. This is surely not a benign malady. The patient asks us for a remedy, and we must try something. Opponents of mercury in some cases say, If you have a severe syphilis, treat it; but leave slight syphilis alone! Now, if we could prophesy that any given case would prove benign, it would, of course, be unnecessary to treat it; but when we try, we find we cannot prophesy as to the nature of any given case of syphilis from the nature of the early symptoms. Hence prudence should make us always treat patients. Mercury was the first remedy tried against syphilis, and it has been the most used. The question then is, Can mercury do any harm? Now, if there is any medicine detested more than another by the public, it is mercury. Patients say to us, 'Is it mercury that you are giving me, doctor? Then farewell to my teeth and my hair!' And there can be no doubt that, in former days, mercury has done much harm. It has three faults. The occurrence of stomatitis is the first; but this is no great danger, and we can avoid this by giving small doses, or keeping the medicine back, when this symptom arises. Dyspepsia and diarrhœa are frequently caused by mercury; but these we may avoid by associating it with small doses of opium, or with bitter infusions. Some patients get thin and pale whilst using mercury; but this too may be avoided by careful diet, and restricting the quantity of the metal used. There are eight hundred women who take mercury at the Lourcine Hospital in the course of one year; and, yet, only one or two of these suffer. If we give mercury in over doses, it may do much harm.

"Does mercury do any good in syphilis, either in curing certain accidents, or as a prophylactic against accidents in the future? In iritis, mercury makes the inflammation subside rapidly. Psoriasis and neuralgia, when syphilitic, are very curable by mercury. Does mercury act on the diathesis? This has been most of all denied, and persons have said that mercury makes the patient pale, but leaves the disease. Mercury, however, *has* an influence over the whole disease. In fact, what do we observe in patients treated carefully by mercury? Only some superficial symptoms, for the most

part, some slight alopecia, &c. What becomes of the patient if the disease is not treated? In the first place, we often notice complete alopecia. We have, too, often enough, opportunities of seeing persons who have not been treated for syphilis. In such cases we find, sometimes loss of the palate, and at other times vision is lost. I say that a doctor who has seen such facts, and yet does not give mercury, is wrong. Mercury and iodide of potassium are the two best remedies I am acquainted with. There is nothing grave, it is true, in the secondary accident, roseola; it is the future we have to think of, and we must protect our patients against future accidents. Opponents of mercury say, that there are frequent relapses after it. This is true, but these accidents consist only of slight eruptions. Sometimes truly there *are* grave accidents after mercury; but yet, if we count cases, we shall find many more severe accidents when it is not used. Mercury, in general, cures syphilis, but not always; for in some cases, the disease goes on. But is not this the case with quinine in some cases of intermittent fever, and would you therefore cease to use quinine? In what form should we administer the drug? Absolute rules are not good in this matter. We must try different forms, until one succeeds. Friction is the oldest method, and the most marked in its influence, It is, however, a dirty method; it rapidly produces salivation, and when this takes place, the patient cannot be treated for some time. With regard to the use of corrosive sublimate, that is a bad remedy, often giving cramps in the stomach and gastralgia (*Casse poitrine*). It is not used once in six months in my service at the Lourcine. Proto-iodide of mercury, in doses of five centigrammes, per diem, may be given. When *ten* centigrammes are given, we must watch lest salivation be produced. Some patients can take one pill, but not more; and if five centigrammes suffice, it is not necessary to give more. This preparation is infinitely more useful than corrosive sublimate. Subcutaneous injection cannot as yet be well judged of; but it will probably not supersede the internal administration of mercury. It sometimes produces great eschars in the back, and sometimes tumours the size of an egg arise, which do not disappear for a long time. How long should we administer mercury? Dupuytren spoke of one hundred spoonsful of Van Swieten's solution. Ricord advised six months of uninterrupted use of iodide of mercury. These absolute prescriptions have much contributed to discredit the use of the drug. We must first of all remember that syphilis must be treated for a long time. Mercury

should not be given uninterruptedly ; the system will get accustomed to any remedy, and it gets tolerant of mercury. Hence, treatment should be successive. If a patient have any particular symptom, treat him for it only for two months. Renew this again after a time for a month, and attend to the idiosyncracy of the patient. The total duration of treatment should be two years, six or eight months of which should be mercurial treatment. For the later periods, iodide of potassium is *the* remedy. Tertiary accidents may occur under all methods of treatment. We must, therefore, tell patients this truth, for it may be of great service for them to know it in the course of twenty, thirty, or indeed forty or fifty years. The patient may have, after all this time, some paralysis or other symptoms, which it is important above all for him to be aware may have some connection with syphilis. Tertiary accidents are constantly misunderstood ; and the great cure of such accidents is the iodide of potassium."

In a pamphlet entitled, " De la Syphilide Gommeuse du Voile du Palais," (Paris, 1868,) Dr. A. Fournier, speaking of a case of gummy tumour with perforation of the palate, (see page 86,) says, " You know the medication we have used in this case. It consisted : first, in the administration of iodide of potassium internally; second, in iodine gargles (water eight ounces, iodide of potassium and tincture of iodine in equal parts of thirty grains) ; third, in daily painting the ulcerated parts with a hair pencil dipped in tincture of iodine. You also know what rapid and marvellous success this medication has given us. In fact, gentlemen, the great remedy, the remedy *par excellence*, in gummy syphilides in general, and in that of the mouth in particular, is iodide of potassium. Not only is it necessary that you should know that iodine is a splendid remedy in such cases, but I have it more at heart that you should well recollect this, that it is the *sole remedy to which it is prudent*—I would willingly say, *to which it is lawful*—to have *recourse* in cases of gummy syphilide of the palate. Mercury is here not inefficacious ; but a hundred times less active than the iodide ; and, at any rate, *too slowly* active for us to trust to it in a disease where instants are counted, where the slightest delay in curative action may bring about the rupture of the velum. It is not sufficient to give iodide of potassium, we must give it in its proper dose, a dose suitable for a lesion of this kind. It is indispensable in cases of this nature, especially in those where the evil is already advanced, to strike a great blow immediately, and to administer the iodide at once in large doses. 'Do not hesi-

tate,' M. Ricord was wont to say to us in his clinical lectures, 'give the iodide immediately, and give it *largâ manu*; for all hesitation, or delay, or timid intervention, may result in an irreparable perforation.' If we proceed by small doses, if we content ourselves with thirty, forty, or fifty centigrammes (six, seven, or eight grains) a day, the remedy does not act; or at least not enough, nor rapidly enough, to prevent the imminent danger. It is timidity and hesitation which brings on the rupture of the velum.

"At once, then, fearlessly *we must* prescribe a really active dose; two or three grammes on the very first day (thirty to forty-five grains); and even if, on the following days, the disease do not appear sufficiently influenced, the daily dose of the remedy must be raised to four, five, or six grammes (sixty, seventy-five, or ninety grains). Doubtless, gentlemen, under the influence of such doses as these, the patient may present some of the phenomena which make up what is called by some *iodism*, such as coryza, running of the eyes, headache, or slight ptyalism, &c.; but what are these inconveniences, in face of the danger which is impending. The patient may be too happy if, at this price, he may avoid a deplorable infirmity. Besides which, the disagreeable effects of iodide of potassium are not always in proportion to its dose. There are some patients who, with seven grains of this remedy, experience symptoms like to those produced by a dose four or five times as strong. One patient cannot take a few grains of the iodide without iodism, whilst another takes large doses without experiencing the slightest symptom. You have a proof of this before your eyes. One patient, to whom, on the very first day, we prescribed a dose of two grammes (thirty grains) of the iodide daily, and then of three and four grammes (forty-five, sixty grains) on the following days, never complained of the slightest painful symptom. And her neighbour in the next bed, who took eight grains a day, presented all the symptoms of the most intense iodism, frightful coryza, running of the eyes, swelling of the parts around the orbit and face almost like erysipelas, headache, sadness, &c. I may add, were the phenomena of iodine more intense and more serious than they really are, there would be still no room for hesitation. Even in this hypothesis, we should be obliged to neglect them, and give the iodide in *large doses*; for it is only by paying this price that we can prevent a grave lesion, too frequently irreparable. Learn this well, that the two dangers, the two real causes of want of success, in such cases, are a too tardy

intervention, or a too timid administration of iodide of potassium. Give the iodide as soon as possible, and in large doses, *largâ manu;* here, gentlemen, is the true secret of the treatment and the key to success." The author heartily agrees with Dr. Fournier on this point.

On the 14th September, 1871, the author had a prolonged conversation on the subject of syphilis and its treatment with Dr. Robert McDonnell of Dublin, and found that that eminent surgeon held some interesting views with regard to the question of dualism. He thinks that as small-pox will become vaccinia if transferred to the cow (Hebra), and he is conviuced that varicella is a near neighbour of variola, so the soft sore, a very difficult lesion to define clearly, may be a near relation of the syphilitic sore. With regard to the contested question, whether women are ever infected through the fœtus, Dr. McDonnell has no cases to prove this question without doubt. His idea with respect to the incubation of syphilis is, that the syphilitic sore *very often* has a long incubation, and this he judges from facts observed among prisoners in Dublin. (See "Lectures on Surgery," Dublin, 1871). He believes that syphilis and vaccinia have been inoculated together; but has not himself seen an undoubted case. With regard to treatment, Dr. McDonnell scouts the notion of Fournier, that tho omission of mercurial courses tends towards the production of tertiaries (see also Diday *Histoire Nat.*); and, although not discarding mercury altogether in the treatment of syphilis or iritis, he very frequently indeed treats these maladies without any. In tertiary symptoms he uses large doses of iodide of potassium. He has seen syphilis of the joints, syphilitic epilepsy, and hemiplegia; but is not sure that he has met with a case of syphilitic Bright's disease. With regard to the use of mercury in pregnant women, he believes this practice not at all proved to be beneficial; and observes generally that practitioners, who praise mercury in syphilis, are usually in the habit of treating *all* their cases with it; and, hence, fall into the natural error of ascribing the softening of an induration, or the fading of eruptions, to this agent, when, for the most part, these are the natural effects of time. Dr. McDonnell says of ozæna, that it is the most intractable of all the tertiary accidents; and he uses large doses of iodide of potassium in such cases, combined with the local application of the vapours of the biniodide of mercury. Iritis frequently does well with atropia drop without mercury he finds.

In syphilitic ozæna, says Dr. Prosser James, (note to the author,) there may be merely hypertrophied mucous membrane, chiefly affecting the region of the lower turbinated bones. In tertiary syphilitic ozæna, inspection may only reveal a dusky hue of the mucous membrane, with erosions here and there. In persons of strumous character he holds that destruction will be most rapid. If the erosions can be seen in the rhinoscopic mirror, they should be touched with nitrate of silver, or iodine vapour may be inhaled. Dr. Thudichum's nasal douche is useful, and permanganate of potash lotions. Dr. James never uses mercurial washes, which he thinks "so very dangerous, as to be likely to go out of use." "Nearly half the laryngeal cases in special throat-hospital practice," says Dr. James, "are to be traced to syphilis." The epiglottis is often the first part to suffer, and it may even become wholly eaten away. The arytenoid cartilages are attacked later on in the disease. The dusky purple hue of the larynx in syphilitic erythema is well marked. "It used to be said that laryngitis," says Dr. James, "was the signal to pour in mercury; I prefer iodine and its salts." Large doses of iodide of potassium must be given. Iodine vapour may be inhaled in ulceration of the larynx. Scarification should be applied in œdema glottidis, or, in some cases, tracheotomy should be performed, although if the rima glottidis be contracted, it may be necessary for the patient to wear the tube always afterwards. Dr. James finds iodide of sodium useful in syphilitic cases; iodide of calcium also he thinks should be tried.

Dr. Morell Mackenzie (*Reynolds' System of Medicine*, 1871, p. 465 et seq.) says he only observed mucous tubercles in the larynx twice in fifty-two patients suffering with secondary eruptions. They disappear under stimulating local treatment. The deep and extensive ulceration of tertiary syphilis may be accompanied by œdema, and followed by dangerous contractions. (Guy's Hosp. Museum, No. 1665-90.) There is great dysphagia when ulceration is attacking the epiglottis; but when cured, the patient begins again to swallow with ease. When the walls of the pharynx are also ulcerated, the epiglottis may become united in a dangerous manner with the pharynx. Gummata of the tongue, pharynx, and larynx should be treated with iodide of potassium, in doses of five, ten, or, in some cases, twenty grains, in combination with ammonia, largely diluted with water; the ulcerated surface being touched daily with nitrate of silver fused on the end of a bent aluminium wire. "This ulcerative process, though of the most active character,

is almost always tractable under this treatment. In no stage of the disease does it appear to me," says Dr. M. Mackonzie, "to be necessary or desirable to use mercury." Dr. Mackenzie adds, that in his experience the chronic laryngitis met with in syphilitic persons, associated as it generally is with chronic bronchitis, resists every kind of treatment.

This testimony of his most esteemed friends, Dr. Morell Mackenzie, and Dr. James, in which he most thoroughly concurs, is most valuable in the author's opinion, showing, as it does, that the very disease of all others, syphilitic laryngitis, which was said formerly to do so well with mercury, is much better treated by iodine and by astringents.

Mr. Berkeley Hill, although he thinks mercury of great use in syphilis, yet quotes (*Lancet*, Oct. 28, 1871) from Bœck's *Recherches*, a statistic of persons "whose cases, untreated by mercury or other specific, allow us to observe the natural course of the disease. In 3,560 cases, 2,113 had cutaneous eruptions, 601 had affections of the fauces, 50 had iritis, 33 had affections of the bone, and 16 had gummy tumours." The author wonders that Mr. B. Hill, knowing this, and being so well aware of the virtues of iodine in tertiary cases, should still remain so persuaded of the value of mercury in early syphilis.

TREATMENT OF SYPHILIS OF THE RECTUM.

Mr. W. Allingham, surgeon to St. Mark's Hospital for Fistula, in a most scientific work on "Diseases of the Rectum, &c.," written in 1871, (Churchill, London,) says: "The origin of many fissures of the rectum is syphilis, and of all the varieties, it is the most amenable to general treatment. Many ulcers of the rectum are doubtless of syphilitic origin. They may be the result of either secondary or tertiary syphilis, but sometimes the ulceration of the bowel, with a syphilitic history, is the only symptom present. When the ulceration exhibits itself as a secondary symptom, we usually find condylomata around the anus, and only the mucous membrane of the rectum is affected; but when it occurs as a tertiary affection, the disease, I have reason to believe, primarily attacks the submucous connective tissue: the ulceration is consequently more severe in character and very intractable. The secondary ulceration of the mucous membrane yields readily to anti-syphilitic remedies; but this is not the case with the tertiary affection. I have frequently seen the best

means devised fail to effect a cure. . . . I have stated that syphilitic cases, where the ulceration is a tertiary symptom, are dreadfully intractable. I have not found much benefit to accrue from large doses of iodide of potassium, or from perchloride of mercury. I think iodide of potassium and sarsaparilla, long persevered in, do good in the end. I always use the fluid extract prepared after Squire's formula. I am bound to confess, that these cases do not, as a rule, get well. The most carefully carried out and best devised plans of treatment will fail more often than succeed, in consequence of the recurrence of abscesses and ulceration. Patients sometimes die from such causes. I am of opinion that some strictures of the rectum are syphilitic in their origin, and when they are the patients generally do well."

RESULTS OF MERCURY IN INFANTILE SYPHILIS.

Dr. A. Mora (*Giornale Ital. d. Mal. Ven. e d. Mal. d. Pell.* November, 1871) mentions that fifty-five children affected with congenital or hereditary syphilis were received into Bergamo Hospital, of whom twenty died. Twenty cases were treated by the subcutaneous injection of finely levigated calomel in water, with eight deaths: and thirty-five were treated with corrosive sublimate baths, with a somewhat smaller mortality. This is by no means a satisfactory result of mercurial treatment, and corroborates in all respects the statistics of Dr. Bœck. (*Recherches sur la Syphilis.*) Dr. Mora is much in favour of this method of treating adults, which is due to Dr. Scarenzio, and uses it in all cases of secondary and tertiary syphilis seemingly without distinction. In children, abscesses are often caused by this method, but in adults these do not seem to occur so frequently.

DR. G. KRAUS ON MERCURY IN SYPHILIS.

In the *Allgem. Wien. Med. Wochsch.*, of October and November, 1871, Dr. Kraus treats of the different methods in which mercury may be used in syphilitic patients. When the patient is too low for the inunction of mercury, he says, baths of corrosive sublimate are useful in psoriasis and mucous tubercles of the genitalia. The latter, however, he treats topically, first touching with chlorine water, and then dusting with calomel. Baths of corrosive sublimate are either general or local. As to the hypodermic injection

of corrosive sublimate, Dr. Sigmund wrote in 1869 that this way of treating syphilis offected but little in psoriasis or in gummata, and also that it was slower in its offocts in early syphilis than was the case with inunction. The injection was made with a solution of twenty-four centigrammes of sublimate in thirty grammes of water. Infants were sometimes treated in this way; but calomel was preferred. One of the objections is the frequent inflammations of the skin and cellular tissue caused by this practice. Theso cause great pain. Abscosses of dangerous nature may follow subcutaneous injections of sublimate. Occasionally the fluid gets into the circulation, and suddenly symptoms of poisoning follow (Nussbaum). Salivation is not uncommon. Dr. Kraus thinks the practice not useful in private cases. Mucous tubercles of the lips and tongue are better touched with solution of sublimate than with nitrate of silver, since the latter blackens the teeth. In psoriasis of the tongue, however, he prefers nitrate of silver. Mercurial suppositories are seldom used. Zeissl, it appears, used mercurial suppositories for a time in Vienna. The patient introduced them twice a day into the rectum, and stayed half-an-hour in bed after doing so. Equal parts (one gramme each) of stronger and milder mercurial ointment were made into suppositories with a gramme of cocoa butter. Salivation was caused in one experiment. Lebert has lately praised suppositories greatly in treating syphilis. Dr. Kraus thinks this method also unsuited for private practice. Fumigations have been praised by Acton, Parker, Ricord, &c., in old syphilis, such as ulcers of the throat and nostrils. Dr. Kraus has been disappointed in this practice. Three to six grammes of cinnabar are evaporated, and this is done every three or four days. None of the vapour is breathed. Local fumigation is made by a funnel. "Calomel, proto-iodide of mercury, biniodide of mercury, and red precipitate, are more or less worthless in the treatment of syphilis; are especially severe on the organs of digestion, easily salivate, give colic, and are never so useful as inunction." After reading the observations of Dr. Alfred Fournier, (p. 141,) it is instructive to compare them with the last part of this quotation from Dr. Kraus of Vienna.

With regard to iodine, Dr. Kraus says that iodide of potassium is of quite remarkable service in syphilitic periostitis, in gummata, knotty infiltration of the skin and mucous membranes, in cases of lupoid serpiginous ulcerations, and in visceral syphilis; as also in hereditary syphilis in adults. He, however, says that in some

cases of tertiary ulceration, inunction will produce a cure, when iodide of potassium has failed. He uses iodide when the condition of the digestive organs is such as to contra-indicate mercury; when patients are anæmic, or have had a mercurial course which has failed. In such cases, iodide of iron, or cod liver oil, to which pure iodine is added, in the proportion of one grain to six ounces of oil, may be of service, in addition to the iodide of potassium. Syphilisation, he says, has had a fair trial and been found of no use; as also vaccination, and the application of so-called *derivatives*, such as croton-oil liniment, blisters, &c. A methodic employment of the water-cure, aided by iodide of potassium, is often of signal service in tertiary syphilis.

Dr. Kraus (*All. Wien. Med. Wochsch.*, Dec. 1871) recommends the use of iodide of potassium in brain affections of syphilitic origin, and gives instances where epileptic attacks were cured by this remedy. Frontal headache and neuralgia are removable by inunction cure, and by iodide of potassium. Syphilitic hypochondria should be treated in a similar way. In syphilitic inflammation of the liver, large doses of iodide of potassium, one drachm daily, followed by inunction, will effect a cure in many cases. Alopecia requires no special treatment. The hair grows again when the health is improved. In inflammation of the middle ear, a local treatment is useful. Specific iritis and retinitis are treated by him by inunction and atropia drop.

Ulcers in the nostrils, says Kraus, require the greatest cleanliness, with the frequent use of the nasal douche and painting with red precipitate ointment. If the cartilaginous or bony part of the septum narium be perforated, next to the douche we should use chlorinated lime injections, and cautery with nitrate of silver.

Syphilitic laryngeal affections, redness, swelling, and ulceration, and their consequences, hoarseness and dyspnœa, which unfortunately too often cause danger of asphyxia, require a general and local treatment. Inunction and iodide of potassium often accomplish wonders in such cases; iodide of mercury, recommended by Semelleder, as well as the hypodermic injection of bichloride of mercury, ought to be laid aside, not only on account of their uncertainty, but because in this affection what is required is a rapid improvement of the blood. Calomel used locally, or cautery with nitrate of silver in solution on the epiglottis, whilst the laryngoscope is employed, are of great use in cases of chronic

swelling, erosions, or ulceration of the mucous membrane. Semelleder remarked, in one case of syphilitic ulceration both of the pharynx and larynx, great advantage to follow upon inhalation of a solution of corrosive sublimate (0·06 to 30·0.) Tannin inhalations are less useful. Kraus says that in two cases of ulceration of the epiglottis and vocal cords, he saw great benefit arise from touching the parts with a solution containing tincture of iodine (1 to 4), after using nitrate of silver in vain. In threatening asphyxia, laryngotomy or tracheotomy must be practised.

Periostitis is best treated by general medication, and, locally, by painting with tincture of iodine, or cautery with a concentrated solution of nitrate of silver.

FORMULÆ FOR GONORRHŒA AND BALANITIS.

All injections that smart are too strong.—(Berkeley Hill.)

All injections to be used thrice a day after micturition, and kept in three minutes.—(Hôp. du Midi.)

1. Injections.—One or two grains of chloride of zinc to the ounce of distilled water.—(Lloyd.) Used in all stages by some.
2. A drachm of liquor plumbi subacetatis to the ounce of distilled water. Used in the period of decline.
3. Two grains of sulphate of zinc in ten ounces of water, with a little laudanum.—(L. Parker.) Chronic stages only.
4. One drachm of tannin, with two drachms of alum in a pint of water.—(T. Smith.) In vaginitis and gonorrhœa in women.
5. Five grains of sulphate of zinc, with the same of acetate of lead, in an ounce of rose water.—(Ricord.)
6. Five grains of nitrate of silver to the ounce of distilled water as an abortive in the acute stage.—(Ricord.) To be used carefully.

OTHER FORMULÆ.

7. A drachm of bicarbonate of soda, one ounce of sugar, two drops of essence of lemon in a quart of water. For a drink.—(A. Fournier.) No beer or spirituous liquor of any kind to be used.
8. Camphor five grains, pulv. opii two grains, for a suppository in chordee.—(Teevan.) One third of a grain of morphia at bed-time.—(Fournier.)
9. Balsam of copaiba thirty drops, liquor potassæ thirty drops; in chronic gonorrhœa, thrice daily.—Rarely used in London.
10. Half an ounce of cubebs daily, or three drachms of copabia daily. In chronic gonorrhœa, equal parts of copaiba and cubebs mixed, a piece the size of a hazel nut twice a day. Drink as rarely as possible.—(Ricord.)—Rarely used in London.
11. Essence of sandal wood, eight drops, in a capsule. Ten capsules may be taken in twenty-four hours.—(Henderson.)

12. In balanitis, liquor calcis as a lotion, or the parts to be dusted with equal parts of powdered calomel and calcined magnesia. —(H. Lee.)

13. Two drachms of perchloride of iron in eight ounces of water as a lôtion in prostatitis, by means of a perforated catheter.—(H. Lee.) Infusion of buchu one ounce, with five minims of laudanum, is useful in these cases.—(J. D. Hill.)

14. Rose water six ounces, alum and tannin, of each seven grains, with two ounces of red Bordeaux wine as an injection in gleet. —(Hôp. du Midi.)

15. Cotton wool sprinkled with powdered alum, or tannate of glycerine, in vaginitis.—(Mauriac, M. Sims.)

APPENDIX.

CHAPTER VIII.

FURTHER DETAILS OF THE DOCTRINES OF SYPHILIS.

ON THE ORIGIN OF SYPHILIS.

The author has recently been reading over many of the works which treat of the origin of syphilis; and, commencing as he did with doubt, has become gradually convinced that the epoch of the origin of the disease was that of the landing of the crews of the ships of Columbus in 1493, in Lisbon, Seville, and other parts of Spain. In a visit to Paris in the summer (1871), he found that Dr. Alfred Fournier, also, had become quite a partizan of this side of the question; whilst the excellent work of Mr. Gaskoin, "On the Life and Writings of Dr. Lobos di Villalobos," has made the English medical public familiar with the idea of the disease being imported from America. The following notes, made from a most excellent paper on this subject, in *Lo Sperimentale*, Oct., 1871, are, the writer believes, most instructive; written, as they are, by Dr. Ferrari, the well-known surgeon at Pisa. Such authors (says Dr. F.) as believe in the ancient existence of syphilis, affirm that not only Job and King David, but that the Emperor Augustus suffered from this disease, and also Tiberius Cæsar, and Galerius Maximus. They also quote Hippocrates who, in one phrase, in his treatise *De morbis*, speaks of "pustulas magnas, et pustulas corpori universo erumpentes: ulcera fœdissima circa pubem." Dr. Verneuil, of Paris, has recently published some documents (*Arch. gen.*, Paris, 1863), which seem to show that the Chinese, long before the Christian era, besides knowing very well the venereal diseases, had known too about mercury as a most efficacious remedy against syphilis. This, perhaps, of all documents, the one which, if genuine, would

prove the antiquity of syphilis, is due to Captain Dabry, French Consul at Hang-Kean, in China. This gentleman asserts that the document in question had been extracted from a treatise written in the reign of Hoang-ti, or 2,637 years before Jesus Christ. (*La Med. chez les Chinois,* Paris, 1863.) Unfortunately, we at once begin to doubt of the authenticity of this work, when we notice the great precision of the descriptions of syphilis made therein, in regard to the times in which they are supposed to havebeen written. Indeed, there is in this treatise a most exact description of gonorrhœa, of indurated, phagedænic, and serpiginous sores, of intra-urethral sores, of buboes and warts, and likewise of the secondary symptoms occurring after syphilis. And then, most suspicious of all, mercury is described as a quite specific remedy, even in these days. Another argument against our belief in this document is, that there is no mention made of hereditary syphilis in it. Although M. Robert, of Paris, thinks that Job in the Bible was afflicted with syphilis, it seems much more reasonable to suppose that his disease was leprosy : and as to the pains in the bones spoken of by King David, there is not the slightest proof of their having been of a syphilitic nature. As to the expression above quoted from Hippocrates, there seems no reason to say that the ulcers mentioned were syphilitic ; they may just as well have been scrofulous ulcerations. Littré, the French medical writer on philosophy, says : " No trace of syphilitic affection is seen in antiquity ; but a crowd of affections of the genital organs are noticed there, which do not refer to any syphilitic speciality."

Whence, then, did the disease come to us? " Although (says Dr. Ferrari) the Americans accuse the Europeans of having carried this disease to them, nevertheless, according to the opinion most universally adopted by the learned men in the Congress of Nantes, in 1835, it would seem that it is a disease of very ancient origin in America, and that, according to Bechi and Sanchez, it came to Europe only at the end of the fifteenth century, brought by the companions of Columbus. And there is, indeed, a most powerful argument to prove this in Columbus himself, who asserts that, when he returned the second time to the New World, he found among the Spaniards who had been left there, to study the manners of the savages, a monk, who, having learnt their language, was able to tell him what he had observed, and particularly the fact that, among the Indians, there existed very commonly a disease which they called *caracaracol,* and which showed itself as a scab over the body.

This, too, is just the time, when we see syphilis arise throughout Europe, for the first time. Antonio Benivieni, a most distinguished physician of that time writes: 'Novum morbi genus anno salutis nonogesimo sexto supra mille quadrigentos a christianâ salute non solum Italiam sed fere totam Europam irrepsit. Hoc ab Hispania incipiens per Italiam ipsam primum tum Galliam cæteresque Europæ provincias late diffusum mortale quamplurimas occupavit.' In the same strain wrote Allessandro Benedetti (1496); Corradino Gilino (1497); Gaspar Torella (1497); and Bartholomeo Montagnana (1498); and a little later, G. de Vigo (1514); G. Fracastor (1546); Antonio Brassavola (1553); and Gabriel Fallopius (1566). And if we desire yet ocular testimony, we may cite the physician Diaz di Isla, and the historian Oviedo, who both had numerous opportunities of speaking with Genovese, in Barcelona. Besides these, Guicciardini and Bembo speak of it as quite a new disease."

The 4th March, 1493, was the miserable day in which syphilis appeared in Europe—Lisbon, Seville, Barcelona, and Gallizia, where the ships of Columbus landed, these were the first spots rudely infected. In Barcelona, as Diaz di Isla narrates, the venereal disease was shortly so spread, that public prayers and fastings were offered up to God, in order that they might be delivered from it. When in the month of August, 1494, Charles VIII. went with a large army to Naples to conquer that kingdom, from thence gradually also in Italy did the terrible disease manifest itself, so that the French called it *mal de Naples*, and the Italians called it *mal francese*. Lastly, the return of these soldiers to their native land diffused syphilis in Switzerland, France, and in every other part of Europe abundantly, and by commerce it thence passed on to the coasts of Africa, among the Turks, Persians, Chinese, and people of Japan. In those days, too, syphilis showed itself with much greater gravity than at present; both primary and secondary symptoms came on more rapidly. Christoforo Girtanner says: (*Trattato s. la mal. Ven.*, Venice, 1801), that a few hours after impure congress, there showed itself in the prepuce or glans a rather itching vesicle, which quickly opened and became a chancre. In a few days universal lues followed. Over the whole body and face there appeared pustules the size of a pea, or sometimes a little nut, sometimes a little larger. These appeared red and inflamed, and were accompanied by great pain, but did not pass into suppuration. To this were associated most cruel pains in the bones by night, and exostoses of

all kinds, which became inflamed, and sometimes degenerated into caries. Cataneus describes it as: "Monstruosus morbus nullis ante sæculis visus totoque in orbe terrarum incognitus, fœditate magnâ, innumeris pustulis ulceribusque per totam faciem universumque corpus mulieres virosque deturpans." And that the disease declared itself in a most terribly frightful manner, is proved again, in that the poor patients were, from the first, abandoned by everyone, and even by the physicians, who, however, becoming ashamed that the sentiment of charity was extinguished in them, along with the love of science, commenced soon to think seriously of how to succour them. Also the Parliament of Paris in its decree of March 6th, 1497, expelled from Paris all who were suffering from the *grosse verole*; also adding that the poor were to be transported to Saint Germain des Près, where they were abundantly provided with necessaries. A similar law was passed in the same year, by the King of Scotland.

Twenty-five years after this, syphilis began to become more mild, and its contagion more restricted, its symptoms less intense, and death less speedy, and especially much rarer; but what is singular is that, just as the disease diminished and became less malignant, its manifestations increased in number. From this circumstance, the physicians who studied this disease discovered many new facts regarding it. In fact, G. Torella, among the first, and then Sebastian Aquilanus, Cataneus, Benedetti, Massa, Fallopius, Botallus, and many others, noticed that syphilis was able, also, to be transmitted by nursing. Paracelsus says that: "Le mal français nait non seulement de Venus, il se transmet par l'hérédité." Vigo, in 1514, speaks of exostoses, and distinguishes syphilis into confirmed and non-confirmed; and further on Massa says that syphilitic dyscrasia only follows after non-suppurating buboes. Fracastor, Monti, Benedetti, Lenocenus, Cumanus, and Torella, exclude suppurating buboes from among the symptoms of syphilis; and Torella, Pario, Fracanziano, and Botallus, remarked that the ulcer of syphilis is hard and indolent. Gaspar Torella (1498) remarked that dry eruptions are generally seen in syphilis, and Benivieni (1502) says that large pustules which became ulcerated, were the rarest forms of syphilitic affections. Torella, the most celebrated writer on syphilis of his times, divided syphilitic skin diseases into dry and moist. Benivieni described five species of syphilitic pustules; and Fallopius distinguished them into *pustulæ sine cortice*, and *pustulæ cum cortice*.

DOCTRINE OF THE CHANCRE.

About the first half of the sixteenth century, says Dr. Ferrari, (*loco cit.*) physicians began to confound venereal and syphilitic diseases. Thus G. Vella (1508) and Antonio Brassavola (1551) referred all venereal disease to the same origin, the latter in a work on the "French Disease." So that, until the days of Hunter, the whole doctrine of venereal diseases fell into the greatest confusion. It was from this epoch that we may say that the doctrine of unicity of venereal sores and gonorrhœa may be traced, and it was upheld by Swediaur, Vacca, Barbantini, and John Hunter, as it is in our day by Sperino, Lagneau, Lane, Gascoyen, and others. One author (Devergie, senior) remarked that no better proof of unicity exists than the fact observed by him, that of three men who all had connection with the same woman, one contracted urethritis, another an ulcer, and the third a different lesion. Swediaur relates that he treated three women for syphilitic ulceration of the tonsils after a gonorrhœa, of which they got rapidly well—thanks to mercury; and Baumés relates how that five persons became affected with syphilitic eruptions after gonorrhœa.

Experiments, indeed, seemed to have confirmed some in this way of thinking, since Hunter, having inoculated himself on the penis with gonorrhœal pus, saw two ulcers arise, followed later on by symptoms of constitutional syphilis. However, the experiments of Balfour, Bell, Bosquillon, Hernandez, and of the School of the *Midi* of Paris, were opposed to these views, and by that school it is now clearly proved that even the urethra may, in any part, be the seat of ulcerations, which are, in such cases, the origin of syphilitic infection. To Ricord it is that we owe the discovery of the hidden chancre in 1838. The idea of an urethral ulcer, indeed, is very ancient, since Celsus believed that gonorrhœa was derived from an ulcer of the urethra; and Mayerne asserted the same during the last century. There can be no doubt that gonorrhœa may be virulent when ulcers exist in the urethra.

Unicists, however, observed that hidden urethral chancres are very rare compared to the numbers of cases of syphilis appearing after gonorrhœa; in fact, of three hundred and eighty inoculations made by Lafont Gouzy with pus from gonorrhœa, there was only twice any ulcer seen to follow; whilst Ricord, out of four thousand six hundred and ninety-two cases of syphilitic eruptions, verified the existence of a previous ulcer in four thousand and eleven cases,

and in six hundred and eighty-one cases, an ulcer and a gonorrhœa together had preceded the eruptions. Ricord thinks that the hidden urethral chancre only occurs once in a thousand cases of gonorrhœa. And in clinical experience, we know very well how very rare it is to see syphilitic eruptions succeed to gonorrhœa alone. The identicists, however, say that Martins, out of sixty cases of syphilitic skin disease, noticed that gonorrhœa had preceded it forty-six times; and that Cazenave had noticed the same in eighteen cases out of sixty-two. But to this it is replied by Ferrari, that such reasonings are erroneous, because the first of these authors had merely drawn his information from the words of the patients themselves; and Cazenave had taken for syphilitic eruptions, in many cases, the eruptions caused by the use of balsamic remedies. Thus, we may conclude that there is no nosological identity between gonorrhœa and ulcers, for three reasons: (1) That pathological anatomy and experiment have proved now-a-days, in a manner which admits of no doubt, the existence of the hidden chancre; (2) That in conjunction with the rarity of hidden chancres, is the rarity of syphilitic disease after gonorrhœa; (3) That these gonorrhœas have, by means of inoculation, been recognised to be symptomatic of hidden ulcers.

Unity and Duality.—Gonorrhœa being thus considered as an entirely local disease, the power of causing infection resides, according to the mass of syphilographers, in the two forms of venereal ulcers; and thus arose the doctrine of unicity in 1838, which however did not last long; for, in 1851, Bassereau proclaimed to the world the doctrine of the duality of syphilitic sores, one being entirely local, the other, according to the author, a proper virus. He proved his theory partly from history, asserting that, whilst in the ancient authors ulcers are mentioned, there is no mention of any special dyscrasia like syphilis in their writings; whereas, when syphilis first appeared, Torella, Vigo, Botallus, and Fallopius said that the ulcer which preceded this disease was very unlike that described in the writings of the ancients. These facts, which were thus demonstrated *á priori* by Bassereau, have been confirmed since then by many other observations besides these of their author, by Clerc, Diday, Rollet, and Fournier, by all of whom the just nosological distinction between these ulcers has been shown. These differences have been thus expressed:—(1) That whilst the ono sore is usually solitary and rather unfrequent, the other is generally multiple and much more frequent. (2) The first is painless, the second generally painful.

(3) Whilst the one sore secretes very little, is usually superficial, and with a process of adhesive inflammation, healing *without* a scar; the other has an abundant secretion, is excavated, with sharply cut edges, and with its floor covered with abundant granular exudation, and heals *with* a scar. (4) The one is *generally* indurated at its base, the other most frequently is soft, or has only the induration of inflammation. (5) The one is not inoculable on the same individual, says Bassereau, does not become diffused, and very rarely, indeed, becomes phagedænic, or gangrenous; the other is auto-inoculable on the patient, and is easily inoculated on the neighbouring parts, as also frequently complicated by phagedæna and gangrene. (6) The first has an incubation of twenty-five to thirty days, the second has no incubation. (7) In the one there are many of the inguinal glands enlarged, but these are indolent, and scarcely ever suppurate; in the other there is no necessary induration of the glands, but whenever there exists a mono-glandular bubo, it easily suppurates and becomes an ulcer. (8) The first kind of ulcer is only seen in the human race, the other is transmissible to animals.

These distinctions were derived from the following data. (1) With regard to the frequency of the ulcers, it was observed at the Hôpital du Midi that, of two hundred and fifty-four patients with "soft sores," one hundred and sixteen had from three to six sores; forty-one patients had from six to ten ulcers; and eight patients had from ten to fifteen ulcers. Again, of four hundred and fifty-six cases of "hard sore" noted by Fournier, two hundred and twenty-six patients had only one ulcer, and one hundred and fifteen had more; but scarcely any had more than two or three. Clerc, of Paris, out of two hundred and sixty-seven patients, found in two hundred and twenty cases, only one hard sore. And with respect to frequency, among the class of patients seen at the Hôpital du Midi, of three hundred and forty-one cases of chancre, one hundred and twenty-six were "hard sores," and two hundred and fifteen "soft sores." Puche, indeed, made out that, of ten thousand sores seen at the Midi, only one thousand nine hundred and fifty-five were followed by secondary symptoms; but, in private practice, "hard sores" are far more common.

Induration arises without any inflammatory symptoms, whilst the "soft sore" has notable swelling, redness, and other marks of inflammation. According to Robin, the induration consists of cellular tissue, with some cutaneous elastic fibres mingled with it

and Virchow affirms that the hard ulcer presents the same development as gummy tumours; and that there is a proliferation of the cellular tissue, in which the elements live for a time; finishing by softening, degeneration, and ulceration. (*Path. des Tumeurs*, Paris, 1869).

The induration of the infecting sore is a sign of greatest importance in the differential diagnosis of the two forms of venereal ulcerations. The unicists, however, categorically deny the existence of this specific character of the infecting sore, because they have found it wanting in the female, in the majority of cases. For instance, they say that Melchior Robert, in four cases, found only once a distinctly indurated sore. Pirondi, of one hundred and fifty-seven ulcers in women, only noticed one which was truly indurated; and H. Lee, of seventy-one infecting ulcers, noticed only nineteen which were hard. Dr. Ferrari, of Pisa, remarks that, in his wards for venereal cases, he has pretty often found this character absent, especially in the fourchette, or the vagina; but this he has rather ascribed to the special nature of the tissues concerned, than to induration being really absent. In fact, Virchow has demonstrated that in these organs, where there is a want of connective tissue, the cells and nuclei of the "sifiloma" would appear to be formed by the proliferation of the nuclei of the capillaries.

It may very well be, says Ferrari, that this exception in the case of women is due to the fact, that the proliferation of the anatomical elements of the "sifiloma" takes place only at the expense of the nuclei of the capillaries, and hence it is very natural that hardness should be but little, or not at all, appreciable to the touch; because the neoplasm is but little evident, on account of the small proliferation of these elements. Besides, according to Bumstead and Pellizari, it is most marked in the balano-preputial sulcus and on the lip. The unicists, also, say that the ulcer which becomes hard is no longer an ulcer; but a true manifestation of syphilitic infection. But in opposition to this idea of theirs, is the confrontation, used by Bassereau, Clerc, Diday, Rollet, Fournier, and Cady. According to Sigmund, of Vienna, in seventy-one cases the induration appeared on the the ninth day; in eighty-four cases, on the tenth; and in twelve cases, on the eleventh day. Specific induration ordinarily remains for some time after the ulcer has been cicatrised, and, according to the statistical results of Puche, its presence is rarer after the third month, and very rare indeed after the

eighth month, although the said writer has observed in eleven cases that the induration was perceptible from three hundred up to two thousand six hundred and sixty-two days after contagion, and he gives one in which it remained nine years. Ricord saw, in one case, an induration remain for thirty years. Clinical observation has shown clearly, that in the infecting ulcer there exists a period of incubation between the moment of contagion and the appearance of the ulcer, whilst in the other the appearance of the ulcer takes place in a few hours, or in two or three days at most. Diday, out of twenty-nine cases of infecting ulcers, found a mean of fourteen days of incubation; Chevalier in ninety cases, found the incubation fifteen to eighteen days; Clerc found it to be thirty days in different cases; and Castelnau found it to be thirty days in one case, whilst Bumstead found it to be ten days in some cases. The unicists, however, deny the existence of the incubation; and point to observations of Fournier and Diday, which showed the incubation period *sometimes* to be about five days. They also speak of the observations of Langlebert, Ricord, Bassereau, Melsens, Robert, Zeleschi, and Davasse, from which it would seem that, even in twenty-four hours after inoculation, the infecting ulcer showed itself. But to these reasons of the unicists, we may first of all remark, that the number of cases cited is so small as to constitute rather an exception than a rule; and in the second place, that the incubation was found to be always pretty long, in cases when artificial inoculation was employed; just the cases when experiments might be made more accurately and precisely. Thus Delhomme inoculated from a true syphilitic ulcer in one case, in 1850, and there was an incubation of one hundred and eighty days. Rinecker, in 1852, found an incubation of twenty-five days. Bærensprung inoculated in 1859, and there was an incubation of thirty-three days. Danielssen, in 1853, saw a similar incubation of fourteen days. Rollet, in 1856, saw the incubation last eighteen days. Gibert, in 1859, saw syphilis when inoculated incubate nineteen days. Cullerier, in 1861, inoculated and saw an incubation of fifteen days. Fieni, in 1861, saw a case of twenty-one days' incubation. Wallor saw a case of thirty-four days' incubation in 1851, after inoculating with the *blood* of a syphilitic patient; and Gibert, in 1859, a similar incubation which lasted thirty-five days. Pellizari, in 1860, made three inoculations with blood, and in one there was an incubation period of twenty-two days. Again, when the secretion of mucous tubercles was inoculated, Wallace, in 1835, made three inoculations, and the

times of incubation were from twenty-three to thirty-six days. Gibert, in 1859, made two inoculations from mucous plates, and saw periods of incubation of eighteen and twenty-five days. Waller saw one which lasted twenty-five days; Guyenat, in 1859, one which lasted twenty-four days; Bærensprung, in 1859, one of thirty days; Lindwurm, in 1860, saw one which lasted twenty-six days; Galligo, in 1860, one which lasted seventeen days; Hebra, in 1861, inoculated with secretion from mucous tubercles, and the incubation period was sixteen days.

The secretion of pustular syphilitic eruptions was inoculated by Wallace, in 1862, in two cases, and there was an incubation of twenty-nine days; Vidal found, in one such case, an incubation of twenty-eight days; and Rinecker, in 1852, also inoculated from a congenital pustular syphilitic affection, and found the incubation period to be twenty-eight days.

As to re-inoculation, H. Lee ("Br. and For. Med. Ch. Rev.," 1859) first of all pointed out how excessively difficult it was to re-inoculate the infecting ulcer, and this was proved by many other experiments arranged for the purpose. Fournier, in ninety-nine cases produced auto-inoculation only once; Puche, in one hundred cases, succeeded twice; Laroyenne, once in nineteen cases; Rollet, six times in one hundred cases; and Poisson had the same result in fifty-two cases experimented on. Diday believes that the greater or less capacity of the infecting ulcers to be re-inoculated depends on the period of the ulcer from which the secretion is taken. He thinks the best time to succeed is when the ulcer is in the period of invasion. Bœck, however, affirms that all periods are suitable. Dr. Ferrari, of Bologna, thinks it is impossible that one infection can succeed another, and holds it only possible that new infection shall take place when the virus has abandoned the organism—a most rare case, but one occasionally observed, according to Virchow. The author has not seen any such case. As a general rule, then, the infecting ulcer is not re-inoculable, except when the syphilitic poison has entirely left the organism; otherwise we have to do with a mixed ulcer. The non-infecting ulcer is re-inoculable sometimes a thousand times on the same person. The infecting ulcer is usually accompanied by multiple and enlarged glands, whilst the non-infecting either causes no alteration of the glands in the groin at all, or, when it does, there is but one gland usually affected on one side, which suppurates and ulcerates. This peculiarity, which is a great addition to the facts already mentioned, in showing the difference between the

sores, is warmly disputed by the unicists, who adduce several cases to prove the contrary. Davasse cites eighty-nine cases gleaned from Fournier's work; the bubo was not verified except in one-third of the cases. In twelve cases the bubo was not noticed, in thirty-nine it did not exist, and in three it suppurated, whilst it was resolved in seven cases. This writer remarks how, even when suppuration of the bubo took place, still constitutional infection sometimes occurred. Thus, in one observation, an ulcer appeared three days after connection, yet a suppurating bubo followed, and the patient had afterwards induration and syphilitic eruption on being inoculated from his own ulcer. (Ricord, "Traité de l'Inoculation," 1838.) In another observation, it is mentioned that an ulcer, which was followed by double suppurating bubo, was inoculable, and this was followed by pustules of ecthyma on the limbs and penis, and mucous plates in the genito-crural folds.

From the statistical tables of Bassereau it results, that of one hundred and sixty-seven cases of ulcers followed by syphilitic skin eruptions, the ulcers were accompanied only thirteen times by suppurating bubo. Melchior Robert observed in eighteen cases of bubo symptomatic of infecting ulcer, that they terminated eight times in suppuration; and Bertini reports the case of a child of four months in which there was seen an infecting ulcer with suppurating bubo. To these cases dualists may say, that they may be examples of double inoculation, with secretion from both kinds of ulcers.

Two years after Bassereau had published his doctrine concerning the duality of the venereal ulcer, Clerc, in a work entitled "Mémoire du Chancroide Syphilitique," (1854,) also confirmed the fundamental principle of the said theory, adding, however, that as to the nosological process of the two ulcers, he believed that the secretion of the non-infecting sore was a true modification of that of the infecting one, by passing through a system already a prey to the syphilitic dyscrasia, and that the said ulcer is fit to transmit itself indefinitely without again resuming its infecting power; he finds between the two ulcers the same analogy as exists between variola and varioloid, and between small-pox and vaccination, so that it appears just to him to call the infecting ulcer chancre, and the other *chancroid*. But how much this theory is in fact without foundation, says Ferrari, may be judged both from history and from clinical experience. Syphilis is a disease of the tissues and the blood, and in the blood, as well as in the liquids of nutrition, there

circulate diseased cells and nuclei, which, being deposited in the tissues, lower and disorder the normal function of the healthy cells and nuclei, so as to lower the nutrition and weaken the organs and their functions. And is it not proved by modern researches that these contagious elements do not at all have their properties modified in the system? The contagiosity of secondary symptoms and of the blood is a clear proof of this.

In 1860, Rollet, of Lyons, called attention to another fact. He observed that whilst the two ulcers might be both naturally and artificially inoculated, each in its own species, still their products may occasionally be found united, so as to form a composite ulcer, which he calls *mixed*. The theory of this physician does not appear irrational, since we cannot see why it should not be true; and it seems also to explain well those cases of "soft sore," which, according to some authors, precede syphilis. H. Lee, Bærensprung, and Sigmund, are, in fact, of opinion that in such cases "mixed chancres" have been present. The mixed ulcer is probably only a mixture of the two elements of contagion, as sometimes happens with the pus of gonorrhœa and of ulcers.

There were formerly some, before the days of Rollet, who attributed the varieties of syphilis to the objective variety of the virus. Such was Carmichael, of Dublin, who spoke of four poisons, of which, although they all were capable of infecting the economy, some alone were incapable of being cured without mercury. But, as was natural, such ideas, finding no reception even in his native land, were very speedily abandoned. Langlebert thinks there exists but one ulcer-virus which is dissociated from the pus, and exists in the serosity. He thinks that the *soft sore* is "the result of the action of the globules of syphilitic pus on a healthy or syphilitic person," whilst the *infecting ulcer* is the product of the isolated action of the syphilitic serosity. According to him, the inflammation excited by the former sore is an obstacle to the virus entering the economy; but in this, says Ferrari, Langlebert is in error, since now-a-days, thanks to the information afforded by the microscope and experiments, it is not admissible any longer to seek for the active principle of any virus in peculiar modifications of the albuminoid materials of the serum or pus. We ought to look for them in the solids. The experiments of Prevost and Dumas on the fecundating properties of the spermatozoids, and not of the fluid which surrounds them, and those recently made by Keber, Chaveau, Beecham, and Mouchy upon vaccinia, variola, and the pus of *Charbon*, show

this clearly. Langlebert, in order to sustain his thesis, invokes the experiments of Bœck, Köbner, and Bidenkap, of Christiania, who, irritating with powdered savine an infecting ulcer or a mucous-plate, which was in the way of healing, say that they obtained, by inoculation of the purulent product, a non-infecting ulcer. To this it may be replied, says Ferrari, that the assertion is far from having been verified, since the experiments have either not succeeded when repeated, or the lesion which ensued was only a simple wound, due to the local irritation of the pus elements, arising from a hyperplasia aroused by the irritation caused by the pus. The author is in doubt here. After all, if we come to a general conclusion, it is desirable to admit that, among all the theories recorded, the one which has the most facts in its support is undoubtedly *dualism*. This seems to be the conclusion arrived at by Dr. S. L. Jepson, in a masterly article in the *New York Medical Journal*, September, 1871. "Granting," he says, (in reference to the views of Clerc and Bœck,) "that our evidence on this point is insufficient; granting even that this soft chancre on the person of a syphilitic patient will produce a soft chancre unattended by constitutional manifestations, when transferred to an innocent person; yet we cannot do other than accept the duality doctrine: for if the effects of the chancre and the chancroid on the system be ever different, the one local, the other systemic, no interchange of species ever occurring, what does it matter clinically, if the chancroid is a derivative of syphilis? Until these points admitted be proved, however, it will not be necessary to ask this question: and until they be proved, the duality doctrine will continue to have a host of supporters."